THE LANCET,

VOL. II.] LONDON, SATURDAY, SEPTEMBER 16, 1837. [1836-37.

LECTURES
ON
MEDICAL JURISPRUDENCE,
NOW IN COURSE OF DELIVERY,
AT
UNIVERSITY COLLEGE, LONDON.

BY PROFESSOR A. T. THOMSON.

LECTURE XLVIII.

NUX VOMICA.—STRYCHNIA.

NUX VOMICA.—*Igasaurate of strychnia in arnica montana. Treatment of poisoning with* NUX-VOMICA *and strychnia. M. Donné's proposed antidotes. Circumstance of the stomach which increases the activity of strychnia.* — CAMPHOR. *Poisoning therewith, and treatment.*

SEDATIVE POISONS:— *Their general characters.* — PRUSSIC ACID. *Poisoning therewith. Recovery. Mode and rapidity of action.*—OIL OF BITTER ALMONDS. *Poisoning therewith. Volatile oil expressed from them.*—LAURO-CERASUS. *Its botanical characters. Laurel water. Poisoning therewith in food, and otherwise. Chemical tests for, and post-mortem appearances in, poisoning with these sedatives. Case of the murder of Sir T. Boughton. Evidence of Dr. Rattray and John Hunter on the trial. Treatment of poisoning with these sedatives.*

GENTLEMEN:—I am disposed to think that arnica *montana* contains igasaurate of strychnia, because not only does the infusion of the petals, when tested with ammoniacal sulphate of copper, afford a green tint, but the symptoms of poisoning by it closely resemble those of poisoning by nux vomica.

In treating cases of poisoning by nux vomica, or by strychnia, the contents of the stomach may be advantageously evacuated at any period of the attack; and the stomach-pump is preferable, in this instance, to emetics. Much dilution is required on account of the very close adhesion of the powder of nux vomica to the coats of the stomach. Dr. CHRISTISON says, that, "if the person be not attacked with spasm in two hours, he will generally be safe."

M. DONNÉ has proposed to employ chlorine, bromine, and iodine, as antidotes for poisoning by strychnia; and, consequently, for that by nux vomica; because he has found that compounds of these substances, and strychnia, are not poisonous. Two grains of the iodide, or the bromide, or the chloride of strychnia, produced no poisonous effects on a dog; and a dog which had taken one grain of strychnia, and two grains of veratria, when tincture of iodine was administered, in less than ten minutes afterwards, was not injured; but when a greater delay took place in the administration of the antidote, it was useless. This, of itself, is, in my opinion, a great objection to these alleged antidotes, as the symptoms of the influence of the poison are not displayed, even in dogs, till twelve or fifteen minutes have elapsed after taking strychnia; and, at any time before these have appeared, the evacuation of the stomach by a brisk emetic will secure the safety of the person. Even after the symptoms of poisoning have first displayed themselves, the evacuation of the stomach lessens greatly the danger of the patient. I am also doubtful whether the hydrochloric acid in the stomach would not greatly interfere with the formation of these iodides in that viscus. The subject requires farther investigation.

All acids should be carefully avoided, as the compounds formed between them and strychnia, or brucia, are more poisonous, owing to their greater solubility than the strychnia or the brucia alone; indeed, the activity of strychnia, either as a poison or as a remedy, very much depends on the quantity of acid present in the stomach at the time of its administration. It is chiefly owing to this circumstance that we find individuals to whom strychnia is administered as a remedy in paralysis, so differently affected by it. DEVERGIE says that he has given it to the extent of seven grains a day to some individuals without any deleterious effect; yet it is well known that some individuals suffer from doses of even

the twelfth of a grain. In one case in the *North London Hospital*, the influence of the acetate of strychnia, in doses of the tenth of a grain, was so severe upon the respiratory function, that I was forced to discontinue the use of the remedy. The application of the actual cautery on the loins, which was substituted for the strychnia, very soon relieved the symptoms caused by the drug; and, in cases of overdosing by strychnia, I have seen cupping on the loins prove highly beneficial.

In the collapse which supervenes, brandy, opium, and camphor may be freely administered; but I have never seen any recovery take place after collapse has appeared.

CAMPHOR.

I have put down *camphor* as the last of the narcotico-acrid poisons; but it is one not very likely to display its influence on man, unless under peculiar circumstances, or where it has been made the subject of experiment, as it was by Dr. ALEXANDER upon himself.

Dr. EDWARDS has recorded a case in which 3ss. of camphor was given in the form of enema. The person soon felt the taste of the drug; and, on going down stairs, he seemed so light that he appeared to himself to skim along the floor almost without touching it. He staggered, became pale, felt chilly, and experienced a sensation of numbness of the scalp. He recovered after taking a glass of wine; but for twenty-four hours the odour of the camphor was exhaled with his breath. ORFILA*, who relates this case of Dr. EDWARDS, made several experiments on dogs, which fully demonstrated the poisonous influence of camphor on these animals. From these experiments, and from a case related by HOFFMAN of a man who took 3ij. of camphor dissolved in oil, the irritant influence of camphor is demonstrated.

The symptoms of poisoning by camphor are, in the first instance, a vertiginous feeling, accompanied with confusion of ideas, and an indistinctness of vision; a loss of consciousness succeeds, with convulsions, foaming at the mouth, and maniacal phrensy.

In treating cases of this kind, the stomach should be evacuated as rapidly as possible, and cordials afterwards freely administered.

SEDATIVE POISONS.

Sedative poisons are usually ranked with narcotic poisons, but the difference of the effects produced by their influence upon the system, is too obvious not to point out the necessity of separating them, and forming a distinct class, or *sedative* poisons.

Sedatives, when administered in doses sufficient to prove poisonous, cause no previous symptoms of excitement: their depressing power is immediately felt, and often, in a few seconds, death, without any morbid symptoms, is the result. That this is the consequence of a direct sedative influence on the nervous energy is undoubted; and the fact that convulsions sometimes display themselves, when the dose is not sufficient to cause instantaneous death, is no argument against the opinion, since defective stimulus of the brain produces convulsions as decidedly as over excitement of that organ; a fact strikingly illustrated in profuse hæmorrhages and over-bloodletting.

The influence of sedative poisons is exerted chiefly on the nerves of sensation; and this is often displayed locally. ROBIQUET continued for some time to hold his finger on the mouth of a bottle containing some strong hydrocyanic acid, whilst he was conversing with a friend; it became numbed, and continued so for thirty hours, yet he felt no other inconvenience from the circumstance.

The sedative poisons differ in other respects from the narcotic; thus post-mortem examinations display no characters of inflammatory action having existed in the mucous membrane, or in the brain, or in the spinal chord; indeed no changes appear in either the stomach or the lungs, nor in any of the nervous organs.

The cause of death, in every instance, seems to be an immediate and direct exhaustion of nervous excitability.

HYDROCYANIC ACID.

The first of the sedative poisons is *hydrocyanic acid*, either alone or in substances in which it abounds; namely—the oil of bitter almonds, the distilled water of bitter almonds, the distilled water of the prunus lauro-cerasus, and noyau.

Hydrocyanic acid has too frequently been employed as an instrument of death by the suicide; occasionally, also, it has been used by the murderer.

In treating of poisoning by this acid, I do not intend to make any reference to the anhydrous acid; for, although it is the most virulent of poisons, yet, owing to the difficulty of keeping it, the possibility of its becoming a poisonous agent is very rare: it is the diluted acid, such as is usually employed as a medicinal agent, which demands our attention.

Many instances of its employment as an instrument of suicide are on record. HUFELAND relates the case of a thief who swallowed f℥j. of the medicinal acid, equal to 40 minims of the anhydrous: he staggered, and died in less than five minutes. A medical man, with whom I was intimately acquainted, determined to destroy himself. After making his will, and arranging all his affairs, he purchased an ounce of hydrocyanic acid,

* Toxicologie Générale, ii., 406.

at Garden's, the Chemist, in Oxford-street; and walked as far as the end of Argyle-street. Having called a hackney-coach from the stand, whilst it was turning round he opened the phial and drank its contents. He almost immediately staggered, was forced to support himself by holding by the post, and had scarcely power with the assistance of the cad, to enter the coach, and order it to go to Sloane-street: on arriving there, the unfortunate gentleman was found, seated in the corner of the coach, completely dead.

An instructive case of poisoning by this acid, where the person recovered, is detailed in the "Revue Medicale," for 1825. A physician at Rennes, who had taken two teaspoonfuls of the officinal hydrocyanic acid with impunity, swallowed, on the 5th September, 1824, at seven o'clock in the evening, an equal dose of the acid twice at a very short interval. He had taken a hearty dinner five hours before. He had scarcely left the room where he swallowed the acid, when he felt a confusion of head, but as he had occasionally experienced the same thing before, he did not particularly attend to it. On entering his laboratory he fell down like a person who had been struck with lightening, or with apoplexy. He lost all consciousness; his face and neck swelled; the pupils became fixed and dilated; trismus supervened; he scarcely breathed; the extremities were icy cold; a strong odour of the acid issued from his mouth; and the pulse was nearly imperceptible. In a few minutes, violent convulsions displayed themselves, and the extremities were horribly distorted. These symptoms continued for nearly two hours and a half, at the end of which time he gradually regained his consciousness; but several days elapsed before he completely recovered.

The French Codex, orders a syrup of hydrocyanic acid. It was administered in drachm doses to seven epileptics in the *Bicêtre*,' and all of them died, with symptoms similar to those which I have just described.

In whatever manner it is prescribed or administered, either therapeutically or as a poison, hydrocyanic acid operates directly on the nervous centres.

Experiments on the lower animals demonstrate that it acts most energetically when it is applied to serous membranes,—next, when it is taken into the stomach,—thirdly, on the cellular tissue and ulcerated surfaces,—and lastly, on the sound skin.

Emmert, Coullon, Krimer, and others, have drawn opposite conclusions to mine, with regard to its action on the nerves,—in consequence of observing that it does not act on cut nerves, nor on exposed nerves;—nor on the brain, nor the spinal chord. They also contend that, because when vessels of a part are tied, before touching it with this poison, its action is prevented; and is not prevented by dividing nerves;—and because it is discovered in blood, it must necessarily operate by absorption.

The rapidity of its action,—for instance, the application of the strong acid to the eye of a dog, causing instant death, is against this idea:—and, in my opinion, it can only be explained, by supposing that the poison acts through the nerves.

The effect of a strong dose of hydrocyanic acid is death, almost instantaneous, and without convulsions. Such large doses may cause death in a few seconds; but some minutes may elapse.

In more moderate, but yet poisonous doses, the symptoms are vertigo, nausea, great depression of the strength; the weakness is felt chiefly in the limbs;—tetanic convulsions; gradually increasing insensibility, coma, and death. In some instances, salivation has supervened.

When it proves fatal, death generally takes place in less than fifteen minutes:—when recovery ensues, the symptoms may go on for many hours;—in some instances they have extended to twelve hours.

If a patient survive thirty or forty minutes, he will generally recover. Nevertheless the symptoms have continued for more than a day, and yet death has ensued. In man, the period depends on the extent of the dose; but in no case are the fatal effects so rapid as in the lower animals. I have seen a dog, to whom ʒiv. of the medicinal acid were administered, die before he could be placed on the ground, from the lap of the assistant who held him. Some experiments were made by Mr. Macaulley, of Leicester, to determine whether an Apothecary's servant who was poisoned with hydrocyanic acid, could, after taking the dose, before becoming insensible, have time to cork the phial, wrap it up, and adjust the bed clothes. He made three experiments on dogs: one dog, who took ʃʒiv., died in four seconds; another, who took the same quantity, died in seven seconds; and a third, who took ʃʒivss., died in three seconds. As far as this evidence went, the presumption was, that the girl had either been poisoned, or that some one had been present to arrange these matters; for had convulsions taken place, her position would have displayed it. The apprentice of her master, by whom she was pregnant, was tried for the murder, but he was acquitted.

Such is the influence of this poison on the animal system.

Cyanide of potassium,

Which is formed by decomposing ferrocyanate of potassa, by a long continued red heat, separating the soluble matter, and evaporating to dryness, operates as a poison in the same manner as hydrocyanic acid. In a solid state this cyanide is deliquescent, very soluble and has an alkaline reaction.

It is inodorous, but has a taste resembling that of hydrocyanic acid. Its effects on the animal economy are exactly the same as those of hydrocyanic acid. It has been recommended to be used in the same manner as the hydrocyanic acid; and requires the same precautions.

OIL OF BITTER ALMONDS.

This is procured by the distillation with water of the marc remaining after the pressure of bitter almonds, in order to extract the bland oil. It contains two substances which operate differently. One is an azotised substance, very poisonous, uncrystallisable; the other, unazotised, and readily crystallising on exposure to air or oxygen gas, which changes it to an acid.

The azotised substance exerts a powerful action on the animal economy, one drop almost instantaneously destroying a small bird. On quadrupeds it exerts a less powerful action than hydrocyanic acid.

ROBIQUET and VILLERME tried its influence on a guinea-pig; one drop appeared at first to produce no effect, but after two minutes the limbs of the animal became tottering, the head swayed from right to left, the animal squatted on its rump, and described an arc of a circle of which the dorsal line was the verge. To this succeeded convulsions of the thoracic muscles, and, after four minutes, it became calm. At the end of seven minutes the convulsions recommenced, the respiration was greatly affected, with a powerful contraction of the expiratory muscles. In three minutes more, every motion had ceased, and respiration was imperceptible, at the end of thirteen minutes the pulsations of the heart were more manifest and easily accelerated, but at the end of eighteen minutes every evidence of life was extinct. When the convulsions ceased, the muscles were relaxed.

The following are the usual symptoms of poisoning by oil of bitter almonds. In small doses, nausea and vomiting first occur; then diarrhœa and vertigo. In large doses, vertigo almost instantly comes on; the features are spasmodically contracted, the eyes are fixed and turned upwards; the pupils are immoveable; the breathing is stertorous; the pulse reduced to thirty in a minute; the breath exhaling the odour of bitter almonds; and death generally takes place in ten minutes.

A woman gave a child the expressed juice of a handful of bitter almonds to cure worms: colic, swelling of belly, vertigo, locked jaw, frothing at mouth, convulsions, insensibility, and death, happened in two hours. The poisonous influence of bitter almonds was known at a period so early, that before the time of DIOSCORIDES, who mentions it, these almonds were used by the Greeks to kill wolves. According to some experiments of ORFILA, twenty bitter almonds will kill a dog in six hours, if he be prevented from vomiting by a ligature on the œsophagus; and when six of the almonds were made into a paste, and introduced into a wound, they killed a dog in four days.

The volatile oil, procured by distilling the marc of bitter almonds, was experimented with by Sir BENJAMIN BRODIE, who found that a single drop of it, placed on the tongue of a cat, killed it in five minutes. The bitter almond, when eaten in great quantity, causes nausea, vomiting, diarrhœa, and other symptoms of disordered digestive organs: and similar effects are produced, in some persons, even when a single bitter almond is eaten. In some cases an eruption resembling urticaria is produced. This was the case with the distinguished author of the "Conspectus Medicinæ," who was so susceptible in the digestive organs, that the same effect was produced on him by white of egg. A stout labourer had eaten a large quantity of bitter almonds. He dropped down, and Mr. KENNEDY, who was sent for to see him, found him insensible; the pulse was imperceptible, and the breath exhaled the odour of bitter almonds, the remains of many of which were found in the stomach.

The effect of the oil of bitter almonds on the human subject is modified by the volatile oil to which it owes its odour, and which operates as an excitant, so that the influence of this oil more closely resembles that of a narcotic than a simple sedative. A gentleman, forty-eight years of age, swallowed ʒij. of it: his servant found him with his features spasmodically contracted, and his breathing hurried and convulsed. A physician who saw him twenty minutes afterwards, found him insensible, the pupils immoveable, the breathing stertorous, the pulse beating only 30 in a minute, and the breath smelling strongly of the oil. He died ten minutes afterwards.

PRUNUS LAURO-CERASUS.

Many parts of plants, which have the odour of the bitter almond, namely, the peach leaves, cherry-stone kernels, and the leaves and kernels of other species of prunus, are as poisonous as hydrocyanic acid, to which all of them owe their poisonous properties. The most poisonous of them, however, is the prunus *lauro-cerasus*, or cherry laurel. It is a beautiful evegreen, flowering in July.

It is a native of the shores of the Black Sea, and was transported into Europe in the 16th century. It thrives freely in our gardens. The plant rises from five to fifteen feet in height, is very branching, and the stem is covered with a blackish bark. The leaves are almost sessile, distick upon the branches, oblong, acuminated at the apex, slightly denticulate, green, and shining on the upper disk, paler below, and ceriace-

ous. The flowers are in long, axillary racemes, each flower being supported on a short pedicel: they are white, small, and exhale a powerful odour. The fruit is an ovoid, elongated drupe, resembling the small black cherry, or guigores, but they are smaller. Their taste is sweet and insipid.

When the leaves of the plant are bruised and distilled, they yield an oil closely resembling that of bitter almonds, and the water which comes over with it contains a small portion of the oil, and a large quantity of hydrocyanic acid.

Dr. PRICE, the alchemist, destroyed himself with this laurel-water, as it is termed. It was then frequently used as a sedative. Many experiments, made on quadrupeds, have determined its powers. Among other experimentalists, M. OLLIVIER, of Angers, found that ℥iv. of it will kill a strong dog in ten or fifteen minutes; and what is, *à priori*, curious, the same dose produces the same fatal effect after it has been freed from the hydrocyanic acid, by means of potassa and sulphate of iron. This has been explained by the fact that, besides the free acid, it contains the elements of the acid, for when liquor potassæ is added to the fluid freed from the acid, and the mixture heated, cyanide of potassium is formed, capable of again forming Prussian blue with sulphate of iron.

As the leaves of this plant, are often used to flavour custards and puddings, accidents have occasionally followed its use in this way. Dr. PARIS mentions an instance of several children, at an English boarding-school, having suffered from a custard flavoured with these leaves. FODERÉ notices, in his "Medicine Legal.," tom. iv., p. 27, the following fatal influence of it on two maid-servants at Turin, in 1784. These girls stole a bottle of the distilled water of cherry laurel, and, fearful of being discovered, they finished the whole in a short time, and almost immediately perished in convulsions. The bodies were opened at the University: the stomachs were found slightly inflamed, but the rest of the organs were in a healthy condition.

Sedatives.—Chemical Tests and Post-mortem Appearances.

In every instance of poisoning by any of these sedative plants, or by the oil of the bitter almond, or by hydrocyanic acid, the post-mortem appearances are the same; and the mode of testing is in all cases the same as if the poison were simple hydrocyanic acid.

With regard to the post-mortem examination of the body in cases of poisoning by hydrocyanic acid, or the substances containing it, much depends on the period at which the inspection is made. The sooner it can be done with propriety the better; for when the body has been exposed for two or three days to the air, no traces of the poison can be detected in it. Its decomposition in the animal body is much hastened by the commencement of putrefaction, consequently the inspection should be made sooner in summer than in winter.

When death has taken place from hydrocyanic acid, the eyes remain glistening, and the features are as composed as those of a living person, appearances which continue for eight or ten hours; and for at least an hour after death, the eye is susceptible of the impression of light: the pupil dilates and contracts. I observed this very remarkably displayed in the case of the medical gentleman which I detailed to you: the glistening continued for upwards of ten hours. It must be remarked, however, that this condition of the eye cannot alone be relied upon as characteristic of this description of poisoning, for the same effect is perceived in asphyxia from carbonic acid gas. Dr. CHRISTISON remarks, that he observed it six hours after death, in a woman who died of cholera. There is, also, a peculiar brilliancy in the eye in fatal instances of poisoning by strychnia, and after death from the epileptic paroxysm. This state of the eye, however, gives value to the other appearances.

With respect to the external condition of the body, the spine is generally stiff, and the belly drawn in.

On opening the body, the odour of the acid is frequently, but not always, perceived; when it is obvious it pervades every cavity; and, often, it is very perceptible in the blood, especially when the dose has been large.

On opening the *stomach* the odour is often very obvious there, when it is not so obvious in the blood. This was the case in an instance recorded by MERTZDORFF, and, also, in the seven epileptics poisoned by the syrup of hydrocyanic acid, in the *Bicêtre*. In the case of the thief recorded by HUFELAND, the villous coat of the stomach was red, and easily detached, as if in a gangrenous condition. I have never seen such an appearance in this viscus. It is a curious fact, that even when the odour of the acid has been very perceptible in the stomach, it has not been detected by the nicest tests; at least such was the case in instances opened by COULLON and others.

In the *intestinal canal* I have not been able to detect any change, although, in HUFELAND'S case, the mucous membrane was faintly reddened.

The veins of the liver, the spleen, and the kidneys, are generally gorged with black, fluid blood, which sometimes exhales a strong odour of the acid. The fluid state of the blood is not, however, constant; in the experiments of COULLON, ITNER, and EMMERT, on quadrupeds, the blood was coa u-

lated. In a case of poisoning with the oil of bitter almonds, recorded by MERTZDORFF, the colour of the bile was altered to blue; but this is a solitary instance of such an appearance.

On opening the *thorax* the lungs are found gorged with dark-coloured viscid blood, to a degree sufficient to make the mere depending parts resemble liver. In some instances, when the dose has been very large, the right cavities of the heart have been gorged with blood, and the left nearly empty, as if the circulation had been suddenly arrested.

In the *cranium* the vessels of the brain and its membranes are also generally gorged, and the odour of the acid has been detected in the ventricles.

Throughout the whole body there is an unusual turgescence of the venous system, with a corresponding emptiness of the arterial.

Now, let us suppose a case of suspected poisoning by hydrocyanic acid, or any of the substances containing it, which have been brought before you, and that your assistance is demanded to ascertain the fact. The first circumstance to which your attention is to be directed is the history of the case, the symptoms, and the post-mortem examination of the body; the second act of inquiry is to determine the fact of the hydrocyanic acid being, really, the poisoning agent.

If any of the poison remain it may be readily recognised by its odour and taste; the acridity is felt especially at the back part of the throat, and this is caused as much by the odour of the acid as by swallowing it. The suspected fluid being thus rendered obvious by smelling and tasting, is then to be tested with several re-agents.

1. Add to the suspected fluid a few drops of solution of potassa, the fluid will remain colourless; then drop in a solution of mixed proto-sulphate, and per-sulphate of iron; it forms, at first, a brownish precipitate, which gradually acquires a greenish-blue tint, and, on the addition of a little acid, a deep Prussian blue is precipitated. The only nicety in this process is to be certain that the solution of the sulphates of iron contain a proto-sulphate, as the per-sulphate alone produces no precipitate of Prussian blue; and, on adding sulphuric acid, the brown precipitate is re-dissolved, but no blue colour or precipitate is formed as when the proto-sulphate is employed.

2. Add to the supposed hydrocyanic acid a few props of liquor potassæ, and then some solution of sulphate of copper; a yellowish-white precipitate will be thrown down, and will become white on the addition of hydrochloric acid. This is caused by the hydrochloric acid dissolving some oxide of copper which is thrown down by the potassa. The white precipitate is cyanide of copper, which is formed as a white powder, very abundantly even when the hydrocyanic acid is in small quantity. According to M. LASSAIGNE it demonstrates the presence of the acid in 20.000 parts of water.

3. To the supposed hydrocyanic acid add a solution of nitrate of silver; a white precipitate is formed which is not soluble in nitric acid, at 60°, but is soluble in that acid at its boiling temperature. This distinguishes this precipitate, the cyanide of silver, from chloride of silver. If the precipitate be abundant, when dried and exposed to heat in a tube, it will evolve cyanogen, which burns with a violet-coloured flame. One hundred parts of the dried cyanide correspond to rather more than twenty-one of the acid, so that the quantity of the acid may be known. This test may also be thus employed:—Put a drop or two drops of the suspected fluid, very slightly acidulated with distilled vinegar, into a watch-glass, and immediately cover it with a plate of glass, the under surface of which, to the breadth of a pen, is moistened with a solution of nitrate of silver, formed by dissolving 1 gr. of the nitrate in 2,000 grs. of distilled water. If the drop of the solution of the nitrate remain transparent, no prussic acid is present; if it become clouded, or milky, that acid is present, provided, on placing it over a glass of ammonia, it become again clear, and that it retain, unchanged, its white colour when exposed to light.

When hydrocyanic acid is mixed with wine, beer, coffee, milk, or other substances, it causes no change in their appearance, unless the mixtures have been kept for some time, when it gives a deep-brown tinge to them, owing to the decomposition of the acid.

In searching for hydrocyanic acid in mixed or compound fluids, if the quantity remaining in the glass or the cup be a few drops only, it may be tested with the watch-glass and nitrate of silver; but if it be in greater quantity, or if we are examining the contents of the stomach, the best method is to distil with a gentle heat, in a large retort placed in a water-bath, and to which a receiver is adapted by the interposition of a very long tube. The materials in the retort must not be allowed to boil, and the receiver must be kept cool with ice. The product is then to be collected, and tested in the usual manner for hydrocyanic acid.

This method of proceeding is applicable to the substance of the stomach itself, the blood, and the secretions, but, in examining these, the process must not be delayed longer than thirty or forty hours after the death of the poisoned person.

It is often of great importance to ascertain the quantity of hydrocyanic acid present in

the fluid which has operated as a poison, and nothing is more easy provided the matters to be examined contain no chlorides. It is effected by simply precipitating the fluid with nitrate of silver, collecting carefully the precipitate, washing and drying it, and then weighing it accurately; every 100 grains of the dried cyanide of silver contain 20.33 of pure hydrocyanic acid.

If we have the oil of bitter almonds mixed with the contents of the stomach, or other matters to examine, then the strong odour of peach blossom at once leads us to the determination of the poison; the same process of distillation at a low temperature, and the same mode of testing the result, is required, as when we are operating upon the diluted acid. The quantity of the acid in the distilled water of bitter almonds, and in cherry laurel-water, may be ascertained by simply dropping in the nitrate of silver, as in the simple diluted acid.

Now, let us take a case of actual poisoning by a substance containing hydrocyanic acid, for instance, *cherry laurel-water*. This was the poison used for the murder of Sir Theodosius Boughton, for which Captain Donnellan was tried and convicted. The evidence on the trial, as far as concerned the condition of the body, and the draught supposed to have contained the poison was painfully conflicting. It was proved, both by Lady Boughton and by others, that the draught had a powerful odour of bitter almonds. She remarked, that when Sir Theodosius, her son, was taking the draught, "he observed that it smelt and tasted very nauseous, upon which I said, 'I think it smells very strongly like bitter almonds.'" Dr. Rattray, who was examined as to the appearance presented by the body after death, was desired, in Court, to smell the bottle from which the draught had been poured. His answer was, "I know the liquid well; it is a distillation of laurel leaves, commonly called laurel-water." Dr. Rattray, also, in reply to a question respecting the smell of the contents of the stomach, said, "One could not expect any smell, but partaking of that general putrefaction of the body; but I had a particular taste in my mouth at that time, a kind of biting acrimony upon my tongue. And I have in all the experiments I have made with laurel-water, always had the same taste, from breathing over the water, a biting upon my tongue, and sometimes a bitter taste upon the upper part of the fauces." Dr. Rattray very properly, however, did not impute this taste to anything but the ammoniacal salts evolved from the decomposing body. I have mentioned it to show you, Gentlemen, the necessity of not permitting your imaginations to run away with your judgment on such occasions. Dr. Rattray had been making experiments with laurel-water, under the idea that the poison on this occasion was laurel-water, and, evidently, imagined the taste; for, as the body was not opened for two days after death, and was in a state of decomposition, it was not likely that the hydrocyanic acid, contained in the quantity of laurel-water administered to Sir Theodosius, would then have remained undecomposed in the stomach. In opening bodies soon after death, however, this is an important point to attend to.

Nearly the same opinions respecting the contents of the bottle being laurel-water, were also given by Mr. Wilmer, Dr. Ashe, Dr. Parsons, Professor of Anatomy at Oxford; and they were all of opinion that from the fact of the smell of the laurel-water in the bottle, and from the symptoms, Sir Theodosius had been poisoned by laurel-water. They based their opinion upon the effects perceived in quadrupeds poisoned by laurel-water. The answer of Dr. Parsons is striking, in reference to his knowledge of the poison being laurel-water. He was asked, "You collect that from the similarity of the smell?" he replied, "We have nothing else to judge from but the similarity of the smell." Nothing can more clearly elucidate the great advantages which Medical Jurisprudence owes to Chemistry than this reply.

John Hunter gave his evidence in a manner calculated to throw some doubt on the fact of the poisoning; and although I think that the evidence generally bore out the conviction, yet I cannot concur with Dr. Christison's remark, that Mr. Hunter's evidence "does him very little credit." I will read it to you, prefacing the perusal by remarking that the symptoms were, in every respect, those that have usually occurred in cases of poisoning by laurel-water.

"I don't wish to go into that; I put my question in a general way?—The whole appearances upon the dissection explain nothing but putrefaction.

"You have been long in the habit of dissecting human subjects; I presume you have dissected more than any man in Europe?—I have dissected some thousands during these thirty-three years.

"Are those appearances you have heard described such, in your judgment, as are the result of putrefaction in dead subjects?—Entirely.

"Are the symptoms that appeared after the medicine was given, such as necessarily conclude that the person had taken poison?—Certainly not.

"Is any certain analogy to be drawn from the effects of any species of poison upon an animal of the brute creation, to that it may have upon a human subject?—As far as my experience goes, which is not a very confined one, because I have poisoned some thousands of animals, they are very nearly

the same; opium, for instance, will poison a dog similar to a man; arsenic will have very near the same effect upon a dog as it would have, I take it for granted, upon a man; I know something of the effects of them, and I believe their operations will be nearly similar.

"Are there not many things which kill animals almost instantaneously, that will have no detrimental or noxious effect upon a human subject; spirits, for instance, occur to me?—I apprehend a great deal depends upon the mode of experiment; no man is fit to make one but those who have made many, and paid considerable attention to all the circumstances that relate to experiments; it is a common experiment which I believe seldom fails, and it is in the mouth of every body, that a little brandy will kill a cat; I have made the experiment, and have killed several cats, but it is a false experiment; in all those cases where it kills the cat, it kills the cat by getting into her lungs, not into her stomach, because, if you convey the same quantity of brandy, or three times as much, into the stomach, in such a way as the lungs shall not be affected, the cat will not die. Now, in those experiments that are made by forcing an animal to drink, there are two operations going on; one is a refusing the liquor by the animal, its kicking and working with its throat, to refuse it; the other is, a forcing the liquor upon the animal, and there are very few operations of that kind, but some of the liquor gets into the lungs. I have known it from experience.

"If you had been called upon to dissect a body, suspected to have died of poison, should you or not have thought it necessary to have pursued your search through the guts?—Certainly.

"Do you not apprehend that you would have been more likely to receive information from thence than any other part of the frame?—That is the track of the poison, and I should certainly have followed that track through.

"Then, in your judgment, upon the appearances the gentlemen have described, no inference can be drawn from thence that Sir Theodosius Boughton died of poison?—Certainly not. It does not give the least suspicion.

"Mr. HOWORTH.—Upon the symptoms immediately produced, after the swallowing of that draught, I ask whether, in your judgment and opinion, that draught did not occasion his death?—I can only say, that it is a circumstance in favour of such an opinion.

"That the draught was the occasion of his death?—No; because the symptoms afterwards are those of a man dying who was before in perfect health; a man dying of an epilepsy or apoplexy, the symptoms would give one those general ideas.

"Then you decline giving any opinion upon the subject?—I don't form any opinion to myself; I cannot form an opinion, because I can conceive if he had taken a draught of poison it arose from that; I can conceive it might arise from other causes.

"If you are at all acquainted with the effects and operations of distilled laurel-water, whether the having swallowed a draught of that would not have produced the symptoms described?—I should suppose it would; I can only say this of the experiments I have made of laurel-water upon animals, it has not been near so quick; I have injected laurel-water directly into the blood of dogs, and they have not died; I have thrown laurel-water, with precaution, into the stomach, and it never produced so quick an effect with me as described by those gentlemen.

"But you admit that laurel-water would have produced symptoms such as have been described?—I can conceive it might.

"Mr. NEWNHAM.—Would not an apoplexy or an epilepsy, if it had seized Sir Theodosius Boughton at this time, though he had taken no physic at all, have produced similar symptoms too?—Certainly."

Treatment.—Hydrocyanic Acid.

The treatment of poisoning by hydrocyanic acid and its compounds is not satisfactory, owing to the rapid action of the poison. When our assistance is demanded, and we arrive in time, ammonia and brandy are the chief remedies. Bleeding has been proposed, but ORFILA, who tried it, found it of no use. A much more certain remedy is the affusion of cold water on the head and spine. Mr. SIMEON, apothecary to the *Hospital of St. Louis*, proposed chlorine. It was tried before by M. COULLON without any advantage.

Communication of Animal Poisons to Man.—A strong peasant at Cronstadt struck her fore-finger, which was free from injury, into the throat of a goose which had dropped down suddenly, (unfortunately not examined accurately), in order to convince herself if any foreign body was choking the animal. Soon after this the woman felt violent darting pains in the finger, which soon extended over the whole hand; very great swelling also soon occurred. Two days after this occurrence, the right arm was considerably swollen, the index finger enormously, the skin bluish red, and very violent pangs extended to the arm-pit. Her general health was at the same time much affected. The surgeon compared the patient with those persons who have been bitten by the viper. With, internally, musk, and, externally, the compound spirit of angelica, the woman got perfectly well.

LECTURES
ON
MATERIA MEDICA AND THERAPEUTICS,
NOW IN COURSE OF DELIVERY
AT THE
WINDMILL-STREET SCHOOL OF MEDICINE.
BY
GEORGE G. SIGMOND, M.D.

LECTURE XXIX.

(Conclusion of that division of the Course which includes the sedatives, anodynes, and soporifics.)

THE URTICÆ.—*Opposite qualities of members of the nettle tribe. Poisoning from touching the urtica crenulata. Venomous qualities of the devil's leaf. Structure of the sting of the nettle. Figs; some poisonous; others used as poultices.* — HUMULUS LUPULUS. *Use of the hop in beer. Its locality, name, botanical characters, and cultivation. Important principle in agricultural. Preparation of hops for the market. Destructive fly which infests the plant.*—COCULUS INDICUS. *Adulteration of beer therewith. Its principle, picrotoxine. Poisoning with both. Hocussing. Intoxication with coculus indicus. Its medicinal uses.—Employment of glichoma hederacea and other plants in beer. Amboise. Tobacco.*—LUPULINE. *Its separation from the hop, and use in beer. Oil of lupulia. Domestic use of the hop. Its remedial value. Use of beer as a beverage. Acidity in the stomach. Preparations of hop and lupuline. Sleeplessness.—Conclusion of this branch of the present Course of Lectures.*

THE NETTLE TRIBE.

GENTLEMEN:—The urticæ, or the nettle-tribe, in which the upas tree of Java is found, is remarkable for the variety of effects produced by the different species, for, whilst some are highly nutritious and agreeable, others are venomous and narcotic; amongst the former we have the fig, the bread fruit, and the mulberry; amongst the latter, the cannabis sativa, or hemp, the leaves of which are narcotic, and are said by LINNÆUS, to have, "vis narcotica, phantastica, dementans, anodyna, et repellens," and from which the Hottentots prepare an intoxicating beverage. Also the hop, or humulus lupulus, which is considered to be narcotic, tonic, and diuretic; and the different species of urtica, one of which, the urtica crenulata, is highly dangerous, even when touched. An instance of this is given by LESCHENHAULT DE LA TOUR: whilst in the botanic garden at Calcutta, one of the leaves slightly touched the first three fingers of his left hand; at the time he only perceived a slight pricking, to which he paid no attention. This was at seven in the morning. The pain continued to increase; in an hour it had become intolerable, it seemed as if some one was rubbing his fingers with a hot iron. Nevertheless, there was no remarkable appearance; neither swelling, nor pustule, nor inflammation; the pain rapidly spread along the arm, as far as the armpit. He was then seized with frequent sneezing, and a copious running at the nose, as if he had caught a violent cold in the head; about noon, he experienced a painful contraction of the back of the jaws, which made him fear an attack of lock-jaw; he then went to bed, hoping that repose would alleviate his suffering, but it did not abate; on the contrary, it continued nearly the whole of the following night, but he lost the contraction of the jaws about seven in the evening. The next morning the pain began to leave him, and he fell asleep, he continued to suffer for two days, and the pain returned in full force, when he put his hand into water; he did not finally get rid of the pain for nine days. Another individual, who was stung, suffered much in the same manner, and described the pain he endured to be as if boiling water was being poured over him.

The effects of the daoun satan, or devil's leaf, are still more venomous; they are said to have occasioned death.

The stings of the nettle present to our view a very curious and extraordinary piece of mechanism. There is even a strong resemblance in them to the dreadful fang of the rattle-snake; for each is formed of a tubular stilet which is perforated somewhere near the extremity; at the lower end it enlarges into a receptacle; at the bottom of this, amongst the cellular substance of the plant is seated a gland, whose function it is to secrete a juice, more or less venomous; this is accumulated in the hollow receptacle, and when any pressure takes place, and sometimes the slightest touch is sufficient, the tubular stilet pushes its needle-like point into the flesh, and at the same moment the poison which is collected in the receptacle ascends, and is poured into the cellular substance under the skin through the tube.

The nettle has been employed as a rubefacient, and urtication, or the application of the urtica dioica to paralytic limbs, or in torpid and lethargic affections, has been found very successful; the young shoots, or tops, are gathered by the rustic classes to boil in broth or gruel; the juice of the leaves has been employed in hemoptysis; a conserve of the flowers and of the seed allays irritation in the kidneys, and, where stone exists, has been given, as an anodyne, with very good effect; a leaf of the nettle placed

upon the tongue, and pressed hardly against the palate, has a very instantaneous effect in bleeding at the nose. Even some of the species of the fig are narcotic and poisonous; thus, the ficus toxicaria is highly poisonous; most of them have, however, the reputation of being generally demulcent, and slightly laxative; they have long been employed in domestic medicine as poultices, and our older writers on "Materia Medica," ascribe their introduction into use, in this way, to their being mentioned in Isaiah for the cure of Hezekiah, when "sick unto death." For Isaiah had said, "Let them take a lump of figs, and lay it for a plaster upon the boil, and he shall recover." "This," as Professor BURNET, observes, "was two hundred and sixty years before the time of HIPPOCRATES, and is the most ancient cataplasm of which history makes mention. Of this tribe, the humulus lupulus, or hop, is most important, and requires some share of our attention, both as medicinal and dietetic.

HUMULUS LUPULUS. THE HOP.

The hop is indigenous to this country, although its use in our domestic beverage did not come into fashion until the reign of Henry VIII., when its utility was first taught us by the Flemish beer makers; at first, it does not seem to have met with very general approbation, for we learn from BLITH, that the good people of the city of London petitioned against two articles, which are now considered indispensable to our comfort, Newcastle coal, and hops; the latter nuisance was complained of "in regard they would spoyle the taste of drink and endanger the people;" we find soon, however, that they came into general vogue; and PARKINSON observes, "The ale which our forefathers were accustomed only to drink, being of a thicker kind of drinke than beere, is now almost quite left off to be made; the use of hops to be put therein altering the quality thereof to be much more healthfull, or rather physicall to preserve the body from expletion of grosse humours which the ale engendered."

This plant grows spontaneously, in hedges and bushy places, in moist rich soil, in almost all parts of Europe, and likewise in North America. FUCHSIUS tells us, that it is the same as the bruo of the Greeks, and the lupus salictarius of the Romans, a plant which, according to PLINY, grew amongst the willows, and twining around them, choked them, and was as destructive as the wolf, from which it took its name; the generic appellation of "humulus," is thought to have been given to it in consequence of its preference for a humid soil. It is said, that our English name is derived from the Anglo Saxon verb, *hoppan*, to climb, but that verb, both in Danish and Teutonic, seems only to have been used to signify that which it does in modern English, *to jump on one leg*. Professor BURNETT, whose love for philology was one of his particular characteristics, thinks it comes from a verb, meaning *to climb*, and that it was intended to describe the peculiar habits of the plant.

The hop has a perennial root; it rises by several weak, twining, angular, rough stems; it does not climb by tendrils, but ascends a prop, trees, or shrubs, on poles, or in hedges; it is often made to reach the height of twenty feet or more, always with the sun, that is, from right to left, or from east to west by the south; this direction is followed by some other plants, such as the honey-suckle, and the black-briony, whilst most of the leguminous plants, such as the kidney-bean, turn the contrary way. The leaves are opposite, heart-shaped, serrated, entire, three or five lobed, of a deep green colour, and sustained on long foot-stalks, which, as well as the leaves, are rough, with minute prickles. The stipules are two or four, heartshaped, bifid at each joint. The flowers, which are on distinct plants, are axillary or terminal, and furnished with bracteæ. The males are on branched peduncles of a greenish yellow colour; the calyx is formed of five oblong, concave, minutely serrated sepals; there is no corolla; the filaments are five, they are short, and have oblong anthers. The females are in axillary, stalked, ovate, drooping catkins, composed of membranous scales of a pale green colour, and containing the germen, which is small, having two very short reflex styles, and awl-shaped downy stigmas.

The season which, for planting hops, the planters in Kent prefer, are the months of October and March; the latter month is generally the best; all that is to be done is to keep in the first months the land free from weeds; about the month of May the ground is to be dug up, raising small hills about the plant. I believe one of the most important duties to be attended to, with regard to all medicinal plants, is the attention to the digging up or hoeing the soil occasionally. My friend, Mr. MOORE, who certainly understands this subject from long practical experience, better than any person who farms for the drug market, has ample reason to congratulate himself on his attention to this point. It is one to which TULL, in his day the best agriculturist, called the attention of the planter; his work, however, was forgotten until COBBETT reprinted it, and one of the maxims which he most strenuously enforces, is the frequent turning up of the soil by which means there is afforded a fresh access of heat, air, light, and of the principles upon which vegetation depends. From a neglect of this the soil becomes so hard and impervious, that the richest and most valuable manure is completely thrown away upon the land: and the vegetable and animal matter, instead of being imbibed as it were by the ground, is rapidly decomposed,

and passes off in the form of gas, which renders the air impure, and, in some instances, gives rise to the production of disease.

In the month of June the young branches, or binds, are twisted together in a knot; about Michaelmas a good store of manure, about forty loads to an acre, about thirty bushels to each load, should be laid down, and dug in during the winter; in the spring the hops are, as it is technically termed, dressed, which is the clearing away of the earth from the principal roots, and cutting off, with a sharp knife, all the shoots which grew up with the binds during the preceding year, and also all the young suckers; about the middle of April, poleing takes place, and the tying, the principal object being to place the poles so that the plant has admission of air and of the sun-beam; about the middle of July the hop begins to blow. When the seeds have a strong scent, when they are tolerably hard and of a brownish colour, they are considered ripe and fit for picking; they should be quickly picked when they are in this state, for should a storm of wind come on, the branches may be bruised and broken, and the hops consequently deteriorated; the first process they then undergo is drying, for which purpose kilns are built, on which the hops, with charcoal, are laid; a steady fire is kept under them, avoiding too intense a heat, which would scorch them; they require turning, which must be done with some attention; as soon as they are taken off the oven they are laid in a room for three weeks or a month, during which they cool and harden; the packing, which is denominated bagging, is the last duty of the hop grower, and consists in placing the hop bag, which consists of four ells and a half of ell-wide cloth, and contains two hundred and a half of hops, in an aperture made in an upper floor; they are trod into this bag by one person, another person continually putting them in as he treads on them; the harder they are trodden, the better they keep. The practice of the Kentish hop planter is not precisely the same as the one followed in Worcestershire, and it differs in different counties; you will find in most of the works on botany, and on agriculture, the different plans pursued.

There are different varieties of the hop; the most valued are the streaked and the white bind. The golden hop ripens later than others, and may therefore be more useful to the planter. The streaked bind is generally of a pleasant flavour, and of a good size.

The hop grower has numerous difficulties to encounter; his plantation is often ruined by a fly, which commences its attacks early in the spring, and destroys the first shoots; this enemy is not so much dreaded as a long winged fly, which is dreaded as a pestilence, not only doing immense mischief, but being the precursor of an insect which does not seem to eat, but to poison the leaf; rain, which destroys the other flies, does not affect them, and the great hope of destroying them is from lightning. These flies and lice are all aphides, and their excrement is what is known under the name of honey-dew, which causes the leaves to turn black, to shrivel, and to fall off; so complete is the destruction occasionally, that a new plantation is required. After all these foes have been escaped, just when the grower's hopes are most excited, and the end of his labour promises to be most fair, a new calamity impends over him,—the red blight, which causes the hops to wear a reddish or deep yellow colour; the leaves grow pale and sickly, and they have a garlicky smell. Dr. WITHERING has made some most valuable observations on the honey-dew, and has pointed out such remedies to the planter as suggested themselves to his enlightened mind. The most important objects to be attended to, are the free circulation of air, the due admission of light and heat, the complete draining the land, the loosening the soil at proper periods, the choosing the proper situation of the hop ground, and the proper incorporation of the manure: these subjects have engaged the attention of our first chemists and botanists, to whom, of course, every point connected with agriculture must be referred, although practical experience alone can be the guide for management. I must refer you for further knowledge upon these points to Professor MARTYN, to "Loudon's Encyclopædia," to Sir HUMPHREY DAVY's work on Agriculture, and to the "Botanical and Medical Herbal," from which you will derive the most important information.

COCULUS INDICUS.

The only ingredients which, according to the laws of the country, are used for preparing ale or beer, are malted barley and hops; but it is generally believed, that the greater number of brewers employ various articles, either with a view of improving the general appearance of the beer, or to gratify the various tastes of their customers. Among these, the coculus indicus, quassia, liquorice, tobacco, and green vitriol, are generally said to be the most commonly made use of. The coculus indicus of the shops, is the fruit of the menispermum coculus, a creeping plant, which grows in various parts of the East Indies. This fruit is like a rough black pea; it is formed of a ligneous pericarp, covered with rugosities, and contains a kernel of a bitter taste, which Mons. BOULLAY, a well-known apothecary at Paris, submitted to analysis, at the request of Professor CHAUSSIER. He found, amidst other matters, a new bitter principle, crystallisable and poisonous, to which he gave the name of picrotoxine. According to his experiments, it constitutes about one-

fifth part of the kernel; but, according to NEES VON ESENBECK, only a hundreth part. Twelve grains of this alkali given to a dog, produced, in half an hour, vomiting, succeeded by the most violent paroxysm, during which the muscles of the face were most horribly agitated. He staggered, always backward. This lasted for three minutes; he then fell on his side; the convulsions became general and shocking; the head and the tail, which were strongly bent back upon the posterior part of the vertebral column, formed an arch, with the trunk; the fore-paws performed frequent movements, like those of a dog swimming; the eyes, which were red and starting, were shut every moment by the blinking of the eyelids, which were dreadfully agitated. Nothing that was likely to excite the animal, under ordinary circumstances, seemed to produce any effect upon him; the tongue was of a livid colour, surrounded by a large quantity of white foam; this paroxysm continued about twelve minutes, and terminated in lock-jaw. He expired in fifty-three minutes after taking the poison, having latterly suffered much from great difficulty of breathing.

The coculus indicus is a poison for fish, and also for different carnivorous animals. Sir JOHN HILL speaks of the berries, as if he were acquainted with their deletereous power; but I am not aware of any cases on record excepting those briefly mentioned by Professor BERNT. Nine individuals were seized with sickness, vomiting, and pain in the stomach and bowels, in consequence of eating some soup which an idiot had, by mistake, seasoned with some of the powder. One of these persons died after the lapse of twelve days. Some singular instances have lately been detailed in some of the periodical papers, in which individuals have been robbed under circumstances which require investigation. After drinking beer, into which some drug has been purposely infused, they have submitted not only quietly, but with an uncontrollable laughter, to be pillaged; and, although perfectly conscious of what was going forward, they have been unable to make any resistance, all volition ceasing for a time. The term applied to this drugging of liquor, is called "hocussing." It has been said, that it is the picrotoxine that has thus been employed, whilst others have ascribed it to an extract of stramonium. The coculus indicus has certainly a very inebriating effect, and is employed in the East Indies to intoxicate the birds of Paradise, and thus to catch them; and, made into a paste, with a little flour and water, with the addition of a little red lead, to give it a colour, and thrown in little pellets into ponds, fish will take it greedily, and become stupified; they swim to the surface of the water, and are taken very readily.

The only medicinal purpose for which it is employed, is for the destruction of the vermin that infest the hair; reduced to a very fine powder, and thrown upon the head, it more effectually and quickly destroys these insects than anything else we are acquainted with.

You will find, in some of the recipes for making beer, this poison, with grains of Paradise, and other stimulants, unhesitatingly mentioned, though contrary to legislative enactments; and, as DON observes, judging from the quantity that is annually imported into this country, it must find some persons very little scrupulous in making their beer bitter and intoxicating by infusing it.

OTHER SUBSTANCES FOR ADULTERATING BEER.

There are many vegetable productions which have, at various times, been employed as substitutes for the hop, which are by no means dangerous; but the beer that is produced is of a very inferior quality. It is true, that some of them impart a bitterness quite equal to that which our favourite plant produces, but the aroma is wanting. Nor do they possess a sufficient quantity of tannin. The glichoma hederacea was employed, at the earliest period, for this purpose, and was very much prized by our ancestors, by whom it was called, ground ivy, and likewise gill ale, ale hoof, and tun hoof, not, as has been said, from the shape of the leaves, but from the Saxon "holf," *to help*, as the leaves were thrown into the vat with ale to clarify and give it a flavour; or, as it is sometimes said, in some parts of the country, to help the beer. Dr. CULLEN thought the use of it in ale "frivolous;" but MEYRICK asserts, that when bruised and thrown into the vat with the liquor, it not only effectually clarifies it, but also communicates an antiscorbutic virtue.

The lentaurea benedicta, a plant called, *par excellence*, "blessed," from its reputation in curing all the diseases under which man labours, and, according to SIMON PAUL, and Arnaldus de Villa Nova, one of the most valuable remedies we possess, has been occasionally used; it is very apt to produce nausea, and even vomiting, for which it has been employed medicinally as a popular simple. The menyanthes trifoliata, or marsh trefoil, has also imparted its bitterness to beer. The teucrium scorodonia, the sage-leafed germander, or wood sage, resembles the hops very much: indeed, in Jersey, it has a high character. It is there called amboise; and we learn, that when cider fails, they malt their barley at home, and, instead of hops, use, to a very good purpose, the amboise of their hedges. RUTT says, that when this herb is boiled in wort, the beer sooner becomes clear than when hops are made use of; but Dr. WITHERING relates that, upon

trial, it gave too much colour to the liquor. It is singular enough, that in Flanders, from whence we learned to have recourse to the hop, they at this day, according to LAURENTS, prefer the plant which I have just named.

The ginger, the gentian, the colocynth, the quassia, the aloes, and the horehound, which are employed by nefarious traders, are generally added where the beer is consumed; and most generally that which contains any portion of these ingredients is reserved until slight intoxication has begun, and the palate has become deadened to the accustomed stimulus. I believe, that the adulterations formerly carried on were much more injurious to the health than those which are now practised, and which led to such strong animadversions from some of the most experienced of our physicians. One of our herbalists observes, "Tobacco is notoriously substituted for the hop, and green vitriol, with other poisons too numerous to name; hence it is that the poor mechanic is drawn into habitual inebriation; he cannot slake his thirst without causing it to return with greater force, at very short intervals. Unconscious of the cause, he repeats the draught, and the consequences are disease, and premature and even sudden death. Half the apoplexies arise not so much from drinking spirits, as from the noxious ingredients administered in the malt liquors thus consumed." To the works of Mr. ACCUM, and those of other writers who profess to be fully acquainted with the secrets of the trade, I must refer you for further information; and when I have occasion to speak to you of the various agents employed as stimulants, and amongst them the results of fermentation, I shall have some opportunities of pointing out to you the peculiar effects of different vegetables which act upon the human economy, when either converted into beverage, or added to some of those fluids which are used as articles of diet, or to promote acceleration of the circulation, and thus influence directly or indirectly the nervous or muscular system.

LUPULINE.

All the peculiar fragrance and bitterness of the hop are concentrated in a principle which is spontaneously formed upon the scales of the strobiles of the female plants. It is to Dr. IVES, of New York, that we are indebted for the knowledge we have gained upon this matter; for he first pointed out, and by a variety of experiments demonstrated, that the hop, on being shaken and sifted, yields a powder which has a very subtle aroma, which is soon imparted to water and alcohol, and which is very spedily dissipated by a high temperature. To this substance, the name of "lupuline" has been given, and lately it has been called "lupulia." In the market it is commonly known under the technical term, *condition*. Lupulia contains taunin, gallic acid, and a bitter principle; these are soluble in alcohol and in water; it has an extractive matter, which is soluble only in water; it contains resin, soluble in alcohol and ether, and wax, which is only soluble in alkalies and boiling ether. The aromatic and bitter properties of the lupulia are more readily and completely imbibed by alcohol than by water, and much sooner by both hot, than when cold; about five-eighths of the whole are soluble in water, alcohol, and ether, there being about three-eighths of a vegetable fibrous matter. Having ascertained that for brewing, the only part of the hop which was absolutely and indispensibly necessary, was this lupulia, Dr. IVES proceeded to discover what quantity was yielded by a given weight of hops. Six pounds of hops, from the centre of a pocket, were put into a light bag, and, by thrashing, rubbing, and sifting, fourteen ounces of lupulia were obtained. The idea that was then entertained, was, that dry hops would produce a sixth-part of their weight of this substance; and this was confirmed; for two barrels of beer were made, in which nine ounces of lupuline were substituted for five pounds of hops. Although the quantity of lupuline was less than commonly enters into the same quantity of wort; and although the weather, for this was done in the month of June, was, in consequence of the great heat, unfavourable to the beer, it was, at the end of five weeks, remarkably fine. This may prove a discovery of essential advantage to the brewer —it may render the whole hop unnecessary; and, as Dr. IVES observes, "if any mechanical means can be devised by which the lupulia may be easily and readily separated from the strobiles, it will consummate an improvement of incalculable value in the preservation of hops and the art of brewing."

MM. PAYER and CHEVALIER obtained a volatile oil from the lupulia, which is very similar in its odour to the hop, but is much more penetrating, feels harsh to the mucous membrane of the nose, and that of the throat, and is likewise narcotic. Dr. IVES had not observed this oil; from its great solubility in water, and its volatility, it at first escaped his attention.

Mr. PLANCHE has given a formula by which lupulia may be obtained in a purified state; he directs that "to separate the sand from the lupulia put it into water, shake it for a few minutes, decant that which is held in solution by the water, and a dark-coloured sand is deposited. Repeat the process several times, and spread the lupulia, which is insoluble in water, on bibulous paper; let it drain, and then dry it in the air, neither exposed to the sun nor to a temperature above 76°. It should be prepared yearly, and this cleansing process must be quickly conducted, or it will undergo a change.

The uses to which in domestic economy

the hops are placed, are principally to communicate their peculiar aromatic, agreeable flavour, and to cover the sweetness of undecomposed saccharine matter, and to separate a portion of a peculiar vegetable mucilage, in consequence of the gallic acid and the tannin they contain. This mucilage diffused through the beer, would very speedily assist in the decomposition that would occur, and the consequent conversion of the fluid into vinegar. The separation, in small flakes, like those of curdled soap, is produced by the hops, and if the beer or ale be very thick, full-bodied, and apparently abounding with this mucilage, the probability is, that if it be kept but a very short time it will run into fermentation, and be unfit for drinking. It is in the solution of malt and water known by the name of "wort," that the hops are boiled, until the liquor "parts," as it is called; that is, until this mucilaginous portion, which rendered it turbid, separates; and they are afterwards removed by pouring the fluid through a coarse strainer, before the cooling and subsequent fermentation take place.

Great medicinal virtues have at some periods been ascribed to the hop plant, and some of the older herbalists speak of its powers in very enthusiastic language; but more modern inquirers have shown that the limits of its utility are very circumscribed. It was at one period described as one of the most valuable medicines for the solution of stone in the bladder. It was said by Lobb to be capable of softening the hardest calculus. "Decocto emollitus est calculus urinarius durissimus, unde concluditur lithonthroptici vim in corpore humano exercere posse," are the words of Murray, of Gottingen; and our great botanist, Ray, seems to have believed that since the hop had been introduced to make beer, fewer individuals had laboured under nephritic complaints in London than previously; however, this opinion soon lost ground, and the very reverse doctrine was promulgated, that the hop was productive of calculous complaints, but we find Dr. Quincy, in the "London Dispensatory," thus delivering the general views of medical men:—"That part of the plant which is such a mighty commodity in England, and used in our malt liquors, is reckoned very discutient, aperitive, and good, in all obstructions of the viscera, and particularly of the liver and kidneys, and therefore that notion of such liquors from them reviving a disposition to breed the stone in the bladder, can have no foundation. They are likewise an agreeable bitter, and, upon that account, good to strengthen the stomach, and render those liquors in which they are brewed much more grateful to it."

I believe that to a stomach in the right exercise of its functions, the different varieties of malt liquor will be beneficial, and that there is no probability of any morbid secretion taking place, but it may be very fairly asserted, that there are very few people who have the organs of assimilation in a proper state, and that the great tendency, after a certain period of life, is to the formation of acid. In the process of digestion, if the laboratory of nature do not possess the proper powers, the food undergoes the same decomposition that it would do if exposed to the action of the atmospheric air, and the consequence is production of acidity. As the acids thus formed would endanger the great organs of life, the kidneys remove them, and they are thrown out by the urinary fluid, or they become deposited in the kidneys or bladder. In some cases beer is very quickly conveyed into the circulation, and from thence passes to the kidneys, so that its diuretic powers prevent the acids from becoming deposited, and from remaining in the system; and hence, where it proves diuretic, it may be considered serviceable in calculous affections, and may be recommended to be employed with the food, but, on the other hand, the beer when taken may not only impede the half-performed digestion, but promote acidity, and its extended train of evils; again, so far from being a diuretic, it may rather deaden every part of the nervous system, and prevent the tissues and organs from being sensible to their usual stimulus. It then retards the circulation; the kidneys take up the acid, and seem to want the power of transmitting it through their own tissues, and hence formations of various kinds are produced. As I shall hereafter have occasion to dwell upon this subject, when speaking of diuretics, I shall only observe, that when there is acidity, heartburn, flatulence, and a previous tendency to calculous disorders, beer will be very injurious, and the red gravel will be produced, and that more especially will be the result of taking ale. There is a fashion now predominant of taking soda with ale or porter, and certainly in many instances in small quantities it assists in promoting digestion, and in neutralising the superabundant acid.

Coles, the herbalist, in 1657, and Dr. Brookes, in our Dispensatory, have both of them spoken of hops as medicinal, but the subject was very much brought before the profession in the year 1801, previous to which there were a few scattered observations, but Mr. Freake recommended it as a valuable bitter, and published the result of his experience, and this was confirmed by several of the medical men of the day, whilst others again tried it in various diseases. Thus Dr. Latham was induced to give it in phthisis, and considered it in the last stages to be a very valuable substitute for laudanum; he found it, too, very serviceable in checking obstinate vomiting. Dr. Mayo had occasion to speak very highly

of its efficacy in the convulsive diseases to which young children are liable, and more particularly under the influence of teething. Dr. Stone was convinced that it possessed considerable power in the removal of the greater number of symptoms which attend disordered states of the stomach. Dr. Mason formed a high opinion of its value as a sedative. Dr. Cullen said, that he had learnt from the highest authority that it was employed in Spain as a sudorific, when the remains of the syphilitic taint lingered in the system. It was also recommended for worms, and the practice of Darelius, who spoke of it as an anthelmantic, was revived.

All these authorities have led to the employment of the hop in the shape of tincture, or of extract, and, though it may not be an active medicine, it is highly useful, and very much aids other medicines by its soothing power on the stomach, and its grateful bitterness, which renders it a very serviceable tonic where other drugs could not safely be administered. The extract of the Pharmacopœia is to be made of two pounds and a half of the hop; and boiling distilled water two gallons; macerate for twenty-four hours, then boil down to a gallon, and strain the liquor while hot; finally, evaporate to a suitable consistence; of this, five grains to a scruple may be employed. For the tincture now called "tinctura lupuli," and before, "tinctura humuli," take of hops six ounces, proof spirit two pints, macerate for fourteen days, and strain; of this, from thirty minims to two drachms may very fearlessly be prescribed. Dr. Ives attributes the stimulating effect rather to the proof spirit than to the hops, and, therefore, thinks the tonic or narcotic influence cannot be of much remedial benefit. He has been led to prescribe lupulia, and he finds it frequently induce sleep, and quiet nervous irritation, without causing costiveness, or impairing, like opium, the tone of the stomach. A tincture is made by digesting two ounces of the lupulia in a pint of alcohol, of which, from one to two drachms is the dose. Dr. Ives states, that inquietude and watchfulness, connected with excessive irritability, in all gradations, from the restlessness consequent upon exhaustion and fatigue, to the most uncontrollable paroxysms of delirium tremens, are more frequently allayed by this remedy than by any other. There is a formula, which is called Magendie's powder of lupulin, which consists merely in rubbing one part of lupulin with two parts of white sugar, until they are intimately blended, which forms a mass by being beaten, from which pills can be made, and this is the best preparation that can be employed.

An infusion of the root of the hop has been used instead of sarsaparilla, and likewise for nephritis. There is an infusion ordered by our Pharmacopœia, but not of the root, to be made from six drachms macerated in a pint of boiling distilled water for four hours, in a vessel lightly covered, and then to be strained. Externally, an ointment has been used in cancerous sores to relieve pain, and a cataplasm of an infusion of the dried strobiles has been applied with some good result to ill-conditioned and sloughing ulcers. The pommade de lupuline is made of three parts of lard and one part of bruised lupulia; dissolve in a warm bath, and strain it through a lawn sieve; this has been spoken of as a very valuable application for soothing pain. A pillow stuffed with the strobiles of the hop, and gently warmed, until the aroma is fully developed, has been from an early period a great favourite as a domestic remedy against sleeplessness, but it does not produce much effect unless a little camphor be added to it, when the odour seems much increased, as well as the powers of the plant.

Conclusion of one branch of this Course.

I have now taken a view of the most important narcotics to which you can have recourse when called on to allay pain, to produce sleep, or to cure the morbid states of the human body. There are still some therapeutic agents, which possess these powers, which I shall hereafter have occasion to point out to you, but they are not to be considered as influencing the cerebro-spinal system in the same way as those I discussed have the power of doing; and, again, there are some which cannot be entered on without explaining, more fully, changes which take place in the vegetable economy, by which educts of peculiar character are developed; thus, the alcoholic agents cannot be thoroughly elucidated until the laws which govern the decomposition of vegetable matter are previously understood. I shall therefore conclude that part of the first branch of the Materia Medica, which embraces the consideration of sedatives, anodynes, and soporifics. I shall next direct your attention to a class of medicines not less important in their effects, nor less valuable in the great economy of nature; indeed, I think, as you advance in the contemplation of this important department of medical science, you will find fresh objects to excite your curiosity, and to gratify that ardent desire which so much distinguishes the student of the present day, of rendering himself worthy the respect and esteem of his fellow men.

ON THE

DIARRHŒAS OF THE PRESENT PERIOD.

By ROBERT VENABLES, *M.D., Physician to the Fore-street and Farringdon Dispensaries.*

As is generally observed at this period of the year, affections of the bowels, in all their varieties and forms, from merely simple diarrhœa, to dysentery, cholera, and colic, have become prevalent. Diarrhœas of various characters have been prevalent for some time, and perhaps all the affections of the bowels which have been observed, may be regarded as but modifications, more or less severe, of the simple form. In some instances a mere increase of the peristaltic motions has taken place, and which, perhaps, upon the evacuation of some noxious generation, has spontaneously subsided. More frequently, however, with an increase in the number of stools, there is a considerable deviation from the natural and healthy appearance of the evacuations. These present different appearances in different instances. In some, the stools are watery, and of a bright-yellow colour; in some, the colour varies from the citron to a deep saffron; in others, they vary from a lively green to the darkest shade of the same colour; while in others I have observed them blueish, or even black like pitch. In the former, the stools are mostly thin and watery, having little or no consistence, but in the blue or black they are more consistent, varying from that of treacle or tar to the thickness and adhesiveness of softened pitch. I have also observed another form, in which the evacuations are watery, but of a reddish colour, resembling the washings of beef, a character owing entirely to an intermixture of blood effused probably from the mucous surface of the intestinal canal.

With the above there are violent pains in the stomach and bowels, at least in the severe forms. The griping is sometimes intolerable, the flatulency very distressing, and the whole alimentary tube in a state of very great irritation.

Other cases assume more decidedly the character of cholera. The patient is attacked first with mere diarrhœa; after a short period nausea and vomiting succeed, attended with violent pains in the stomach and bowels, and cramps of the extremities. However, these affections differ from cholera, inasmuch as the evacuations do not contain an inordinate quantity of bile, nor do the evacuated fluids possess the acrimony which characterises the bilious evacuations of cholera. Air is generated in great abundance, and the pain, for the most part, seems to arise from the distention of the highly-irritable tube by the inordinate quantity of air.

Some degree of constitutional excitement, in some instances considerable, attends. In children, and those of tender age, the excitement is considerable, and of a highly-irritative character; the pulse is rapid and thready; the temperature of the surface very much increased, and, in some cases, a tendency to coma, in others to delirium, prevails, but in none to an alarming extent. In those of more advanced age, and in whom the phlogistic diathesis prevails, the excitement assumes more decidedly the inflammatory character, sometimes so much so as to justify, or even require, a moderate abstraction of blood. In old persons, and in those of the leuco-phlegmatic temperament, there is a deficiency of the natural excitement, and the temperature of the surface and the vigour of the circulation* are soon reduced below par. In most cases the feet, in many, also, the hands, and in a few even the tongue†, have felt unnaturally cold.

Discoloured evacuations of the greenish tint prevail more among children and youths; bluish or dark among those in the vigour of life, and in both these, perhaps, the bloody evacuations are most likely to prevail. In children, and those of extremely irritable and nervous temperaments, the blood resembles the washings of beef before described; but in the vigorous and plethoric it is more like the bloody discharges of dysentery, with which these cases are easily and often confounded; still, the absence of tenesmus and of the other symptoms usually attending the progress of dysentery, will serve to distinguish them.

I now come to describe a form of which I have as yet observed but eight or ten instances; but I am anxious to direct attention to it, because, should it become *epidemic*, which is by no means improbable, it will prove both obstinate and fatal. I have seen it *epidemic* and *fatal* in Spain, yet it is much under the control of treatment. The practitioner, if he wishes to be correctly informed, must examine for himself, nor feel satisfied with the representations or descriptions of the attendants; if he do, he may be betrayed into the belief of a mere simple diarrhœa, or cholera, or colic, or some such, and never attain to any just conception of the nature of the disorder.

It commences most frequently as a diarrhœa of rather severe character. The number of the stools varies from six or seven, to twelve, fifteen, or even twenty, in the twenty-four hours. Vomiting, if it have not attended from the first, often succeeds shortly after the purging has commenced, but the vomiting is seldom very severe, nor does it continue long. Severe pain prevails

* Not the frequency.

† The coldness of the tongue is more frequent in the form about to be described.

throughout the abdominal region, and there is a degree of tension which seems to be independent of any distention. There are pain and confusion in the head, resembling vertigo; the tongue is moist, and frequently cold; the temperature of the surface is, in some cases, slightly elevated; mostly, natural, or, probably, a little below par; the pulse is weak, frequent, and irritable, sometimes more full and soft; the patient, along with the gripings, complains of cramps, especially of the legs, and these sometimes are very severe; the stools, although they uniformly possess one and the same character, yet the sensible properties are never described alike by the attendants. Thus some have told me they resembled "mud;" others, that they resembled "milk;" some described them as resembling "chalk and water;" while others, likened them to "soap-suds." Not one of these imputed similitudes is calculated to convey an adequate or just notion of the nature of these evacuations. They resemble nothing so much as "yeast;" but when first passed they resemble it merely in colour and consistence; probably there will not be a single air-bubble to be seen, and they will, probably, remain in this quiescent state, without the slightest alteration, for hours. The time, however, of quiescence varies in different cases, nor is it easy to assign any cause for this difference. In most cases the evacuation is rather scanty, perhaps never what could be termed profuse; but the peculiar singularity consists in the tendency to *fermentation*, and which invariably succeeds at a period, more or less remote, after being voided. The fermentation, too, is of so active a nature, that although when voided the evacuation may not exceed the bulk of the contents of a six or eight-ounce gallipot, yet, when fermentation has commenced, and arrived at perfect activity, I have seen it overflow a large chamber utensil, and attain a bulk capable of completely filling one of two or three gallons.

To what is this tendency to fermentation owing, how is it generated, or how excited? To questions of this sort it is not easy to give a satisfactory answer, or to suggest even a plausible explanation. We know that the autumnal season brings on affections of the bowels. "Fit item lævitas instestinorum quæ *leienteria* vocatur*"; but we have no reason to presume that Celsus' Lientery bears the slightest analogy to the present affection.† During the present season we have had not only the usual sudden transition from the heat of summer to the comparative cold of autumn; but still farther, the changes have been unusually marked and sensible, as well as various. There are no circumstances more calculated to induce diseases, although, perhaps, we have no means of anticipating, with certainty, their character. We find that it has been remarked, even from the earliest periods of medical history, that sudden and frequent changes of weather, no matter of what description, engendered diseases.

However, let us waive speculation, and come to something more useful,—the treatment of a complaint not of frequent occurrence, and which it is possible, under approaching circumstances, may engage no small portion of the practitioner's attention.

In determining the treatment it is necessary to keep in view the nature of the causes. It is proverbial that diarrhœa and cholera prevail more extensively in autumn than any other season. This has been attributed to the greater indulgence in plums, which generally become more abundant at that period. But there is good reason to believe that this is not wholly the cause. The autumnal diseases frequently commence long before the appearance of that fruit; and, farther, often they do not appear till long after the coming in of the fruit. It also sometimes happens that they commence before the fruit comes in, and cease, as it were, spontaneously at the period when the abundance is at its acmé. That light diarrhœa may occasionally prevail, in consequence of premature indulgence, in seasons when the fruit is slow in ripening, or coming to perfection, probably no one will deny, but still this will not establish the rule. The variable weather, and the frequent changes which rapidly succeed each other at this period, are more obvious causes of the susceptibility generated at this season; and, indeed, it cannot have escaped observation, that when the weather becomes fixed, disease, should it occur, is neither extensive nor prolonged, the constitution seeming speedily to habituate itself to the altered circumstances. Although, however, sudden changes may dispose to disease, we have yet to inquire what gives to these their peculiar type or character; for instance, why have we diarrhœa, as it were, epidemic in one year, cholera in another, dysentery in a third? It was remarked by Sydenham, and there can be little doubt of the correctness of his observations, that there are peculiar constitutions of the atmosphere which, to a certain extent, determine the type of the prevailing disease.* Therefore we can readily admit that vicissitudes of weather may dispose to disease, that is, increase the animal susceptibility, while the constitution of the atmosphere at the period will determine the nature of the disease. In a season so fluctuating and varying as regards both temperature and moisture, the protection of the surface against such

* Celsus de Medicina, lib. ii., cap 1.

† A disease of a similar character has been described by Latham and Roget as epidemic some years since in the Milbank Penitentiary.

* See Sydenham de Morbis Epidemicis, also the Chapter entitled Constitutio Epidemica Annorum, 1661, 62, 63, 64, Londini.

changes forms one of the most important features of the *prophylaxis*. The body should be protected by flannel, which preserves an equability of temperature, preventing the cold, of rapid evaporation, or the cooling of excessive perspiration, and also diminishing the violence of the reaction caused by excessive external heat.

In the more ordinary descriptions of diarrhœa there is but little occasion for the interference of art. A dose of rhubarb in some aromatic infusion, as of cloves, or in some carminative vehicle, will generally answer every purpose. When, however, there is acidity, then we must add some absorbent, and I have found the compound powder of chalk, with an adequate proportion of rhubarb, diffused in water, and then warmed by the tincture of the latter, sufficiently efficacious. To this, should there be severe pain or griping, a little tincture of hyoscyamus, or opium, may be added. This is all that will be required in ordinary cases. When the disease appears to originate in redundancy of bile, mercury, so often resorted to, seems injurious, which, indeed, might be inferred from its promoting the flow of bile, already secreted in too great abundance. When there is a phlogistic diathesis, with any tendency to inflammatory action, a moderate abstraction of blood will prove a valuable auxiliary. When vomiting attends, and proves obstinate, giving, in some degree, an appearance of cholera, the stomach should be evacuated by an emetic of ipecacuanha, or, still better, perhaps, by a saturated solution of salt. Then the treatment recommended above will, in most cases, be effectual. If, however, the diarrhœa should continue obstinate, the rhubarb may be given alone, and, after it has operated, the chalk mixture, with opium, and some astringent tincture, as catechu or kino. There are few cases which will resist these; if such, however, be met with, a blister applied to the abdomen, and the exhibition of starch enemas, with opium, will effect a cure. Cases of this obstinate character generally begin to assume the appearance of dysentery, and ultimately blood, or mucus, or an intermixture of both, is evacuated, and the voiding of the stools is attended with tormina and tenesmus. The treatment of such cases differs little, if at all, from that of simple dysentery. We have only to adjust the means to the violence and urgency of the symptoms. The detail is unnecessary here. When the functions of the liver appear to be suspended, or morbidly deranged, as indicated by the green or other discoloured appearances of the evacuations, calomel may be given in moderate doses till the healthy colour is restored*, or any other unhealthy deviation corrected.

When the evacuations ferment in the manner just described, a somewhat different treatment will be required. The few cases which have come under my observation this season, were attended, in the beginning, with vomiting, and severe cramps of the extremities. I did not see them till the vomiting had ceased, but the cramps and pains of the head continued severe. Had I seen them during the stage of vomiting I should have had no hesitation in administering the saturated solution of salt. The first thing, however, I did, was to exhibit an active dose of calomel and rhubarb, quickening the operation by means of a laxative enema, to which, if flatulence were distressing, was added some fœtid tincture or gum. I then directed two scruples of blue pill, with one of the compound powder of ipecacuanha, to be mixed, and divided into twelve pills; one or two for a dose every, or every other, hour, till the gums became slightly affected. In some I have prescribed from a scruple to half a drachm of the grey or prot-oxide of mercury, with a scruple of Dover's powder, made into a pill mass, with extract of hyoscyamus. The last appears to me to be preferable when we wish to affect the gums very speedily; but the former is perhaps, though slower, less irritating. I have not tried calomel on this occasion, but from former trials I am inclined to think that it proves too irritating in this disease. When once the gums have been affected the disease certainly yields; but it frequently happens in mild cases, that the disease yields, after two or three doses, even without the gums becoming affected. Were the disease to assume the epidemic form, it is probable it would prove more obstinate, and require the full and complete agency of the mercurial.

Absorbents and antacids have appeared to me of little benefit unless when acidity exists in the stomach and bowels. They in no way control the fermentation. Kino or catechu appear to me more useful, but it is still a matter of uncertainty whether they do not act by facilitating the introduction of the mercurial, and inducing its specific action in the system. I have observed, even in the severest cases, that when the mouth becomes affected the symptoms mitigate, but when the system resists the mercurial, the disease proves, for the most part, obstinate and lingering, and, if not ultimately fatal, it so far impairs the health that perfect recovery is protracted to an almost indefinite period.

17, Ely-place, September 2nd, 1837.

* It should, however, be kept in mind that calomel will produce green stools, especially in the irritable intestines of children.

CONTROLLING POWER OF VACCINATION.

To the Editor of THE LANCET.

SIR:—A letter appears in your publication of August 5th, by Mr. Bree, of Stowmarket, upon the subject of vaccination, and I beg, in support of the third conclusion, drawn from the case of Isaac Kersey, to make the following communication:—

Aug. 4. I vaccinated a very healthy child in Lugwardine, near this city; the vaccine pustule formed, and went through its usual stages.

10. I took lymph from the arm for the purpose of further vaccination.

16. I was called to the same child, and found it labouring under the premonitory symptoms of small-pox, and in due course it had that disease in a confluent form. Fearing that the nurse might also become infected, I immediately vaccinated her, but in ten days after (although vaccination satisfactorily matured), she, as well as the mother of the child, sickened, and had confluent small-pox. Three other servants in the same house are now under my care with the same disease, all having marks of early vaccination in their arms. I beg you to observe, that the nurse, who was vaccinated, had a heavier load than those servants who were not, and this I think clears up the point, that

Vaccination has no power of preventing, or even modifying variola, if not had recourse to before the system has become contaminated.

I am, Sir, your obedient servant,

THOMAS PRITCHARD.

Hereford, 8th Sept., 1837.

AMOUNT OF KNOWLEDGE ON THE

PHYSIOLOGY OF THE BRAIN.

DR. BENNETT, in a small work recently published, on the Physiology and Pathology of the Brain*, after giving a short but very comprehensive abstract of the more important physiological and pathological facts with which we are acquainted, and showing the great opposition that exists between the theories which have been deduced from them, thus briefly sums up the principal conclusions as yet arrived at respecting the Physiologyof the Brain:—

"The principal conclusions arrived at, may be shortly summed up, as follows:—

"1. The cortical substance of the brain furnishes the conditions necessary for mental acts.

"2. The medullary portion is formed of three sets of fibres, and serves merely to conduct the influence of stimuli.

"The first set transmit the influence of volition from, and the result of impressions on, the external organs of sense, to the cortical substance,—so that we become conscious of such impressions. Hence, they may be called the fibres of volition and consciousness.

"The second set connect together the two hemispheres of the brain, and convey the influence caused by mental changes from one to the other.

"The third set perform a similar office with regard to different parts of the same hemispheres.

"3. Sensation, as it is at present understood by physiologists, expresses two things:—1st, That the influence of a stimulus has been conveyed to the sensitive column. 2dly, That this influence has been continued on through the fibres of the medullary portion of the brain to the cortical substance. In other words, we must be conscious of the impression that has been made, in order to produce a sensation.

"4. The sensitive column commences superiorly with the optic thalamus on each side, forms the *posterior* part of the medulla oblongata and spinal chord, and terminates where the nerves are given off inferiorly.

"5. The motor column commences superiorly with the corpus striatum on each side, forms the *anterior* part of the medulla oblongata and spinal chord, and terminates where the nerves are given off inferiorly.

"6. All associated movements are either voluntary or involuntary.

"Voluntary movements are excited by a mental stimulus arising in the cortical substance of the brain, which is transmitted to the motor column by the fibres of volition, and continued forward to the muscles moved.

"Involuntary associated movements are excited by chemical or mechanical stimuli, which are conveyed to the sensitive column, by the sensitive fibres in the nerves, and reflected to the motor column, whose filaments transmit them to the muscles acted on.

"From this it follows that,

"7. Voluntary and involuntary associated movements are occasioned by stimuli, the influence of which is conveyed by nervous fibres to the part acted on,—but that, in the one case, the stimulus is mental, in the other chemical or mechanical.

"The movements termed Excito-Motory are of the latter class."

* Inaugural Dissertation on the Physiology and Pathology of the Brain, being an attempt to ascertain what portions of that organ are more immediately connected with motion, sensation, and intelligence. By John Hughes Bennett, candidate for the degree of M.D. in the Univ. of Edin. London: Longman and Co., 1837. 8vo., pp. 79.

REMEDIAL INFLUENCE OF THE

CLIMATE OF JERSEY IN PULMONARY CONSUMPTION.

Dr. Hooper in a recently published work on the climate of Jersey*, after entering at considerable length into details of the topography, fertility, &c., of the island, and enumerating those diseases and attacks of which the inhabitants seem to be peculiarly liable (among which may be mentioned, continued fever, gastric affections, and rheumatism), thus sums up his observations respecting the remedial properties of the climate of this little island:—

"I have already said (page 73), that under the influence of the mild and soft qualities of this climate, chronic diseases generally proceed slowly; and, being less liable to exacerbations, from atmospheric variations, the chances of a favourable termination are proportionally increased, in cases whose nature does not preclude all hope of ultimate restoration to health. In another place, also (page 85), I have alluded to the advantages the island offers, as a sort of initiatory climate for individuals, who, from a protracted sojourn in tropical latitudes, have been unable to resist the inclemencies of less favoured situations. These are, undoubtedly, points of no mean importance, and as to which (if I may trust to my own observation, during thirteen years of general practice) a very high character may be conceded to Jersey, compared with the principal watering places in the south of England. I need scarcely pause to qualify this opinion after the details already entered into, concerning the character of the climate in the different seasons of the year: for having, as I think, unsparingly pointed out its objectionable qualities, it cannot be supposed that I aim at placing it in a light more favourable than it deserves. Enough has been said to show, that, in order to derive any benefit from the genial properties of this clime, some caution is necessary, against the countervailing tendency of other qualities of a very different nature. With this understanding, I shall now proceed to the further consideration of the cases of disease in which more or less advantage may be expected from a residence in this island.

"During nearly three-fourths of the year, the soft and equable character of this climate, joined to a moderate temperature in the two extremes, will, generally, prove beneficial in the incipient stage of pulmonary consumption, when the subjects of that most fatal of all human diseases have, hitherto, lived in less temperate regions. This affection is, most commonly, ushered in by a marked period of irritation, requiring depletion and sedative remedies; both of which means will take greater and more durable effects under our sky than in situations subject to more extensive variations and ranges of atmospheric heat. It would be difficult to understand upon what just grounds this climate could have been supposed unfavourable to invalids liable to hæmoptysis, unless it was in the last stage of tuberculous consumption. For the truth is, hæmoptysis, whether as an idiopathic disease, or as a complication of phthisis, is, here, comparatively rare, local agencies tending much more to prevent than to induce a plethoric state of the system. And, indeed, many instances have come under my observation, of hæmoptysis having been effectually checked by a residence of one or more winters in this island, when no organic disease of the lungs existed, and when the hæmorrhage was simply the result of local congestion. From the lesser intensity of the predisposing causes of hæmoptysis, in this place, its occurrence in the progress of tuberculous consumption is by no means common; and, thus, the latter affection frequently passes into the last stage, free from any other symptoms, but a stubborn cough, and frequent pulse, accompanied by loss of flesh, and, in females, suppressed menstruation. The cough is here observed to be attended by mucous expectoration, very early in phthisis, long before the tuberculous pus is thrown off; and, oftentimes, up to this moment, no degree of emaciation has taken place, such as to create serious apprehensions. Even as one of the consequences of organic disease of the lungs, hæmoptysis scarcely ever fails to be alleviated by a winter passed in this island; and the liability to inflammatory action in the neighbourhood of tubercules being lessened by the same causes which diminish the tendency to local plethora, the pulse is, not unfrequently, improved. It need scarcely be said, that the hopes raised in the patient's mind, by such a mitigation of his sufferings, must soon vanish, in so inveterate a disease as pulmonary consumption. He cannot get the better of his cough; and, although he is often heard to express satisfaction at its having become less hard and fatiguing, the 'phlegm' now being ejected with less difficulty, this change, on which he lays so much stress, is merely the deceitful effect of the milder and softer climate, in which he now breathes, and which has bestowed a catarrhal character on this symptom of his fatal complaint. It is far from my intention, in offering the foregoing remarks, to insinuate, that to this climate belongs the inestimable privilege of alleviating, in any es-

* Observations on the Topography, Climate, and prevalent Diseases of the Island of Jersey, the Result of Meteorological Observations, and General Practice, during Thirteen Years. By George S. Hooper, M.D., Jersey. London: Whittaker, 1837, 8vo., pp. 206.

sential degree, a malady, which, in spite of the rapid advancement of medical science, still bids defiance to all human skill. What is here aimed at, is to place Jersey in its true position among climates of a similar nature, and to draw inferences of practical value, concerning particular morbid actions, which, though sometimes the consequences of phthisis, have, not unfrequently, a separate existence, and admit of a successful treatment. Of this kind is hæmoptysis. I believe it to be generally admitted, by modern pathologists, that the latter disease, when simple, is very rarely occasioned by the erosion of a large blood-vessel; and that, in the majority of cases, the hæmorrhage results from an exhalation of blood on some part of the mucous membrane of the respiratory channels. Now, the state of the mucous membrane predisposing to this affection, is certainly not common in this island; a state widely different from that which induces the diseases, known by the general term *catarrhal*, prevalent under the meteorological influences which characterise this climate.

"From the preceding observations, it may be seen that I consider Jersey entitled to a very high character, among the English climates most suited to invalids labouring under incipient pulmonary consumption, and idiopathic hæmoptysis."

POISONING WITH ARSENIC, PER VAGINAM.

To the Editor of THE LANCET.

SIR:—Regarding the different modes in which arsenic has been administered as a poison, allow me to mention the following very unusual one:—In the "Comment de Rebus," Leipsic, 1793, tom. 35, and in "Metzger," p. 390, we find the story of two women—"Quibus per vaginam oxidum arsenici marito admotum est. Occubuere ambæ; harum una inopinato et perdurante horrore et urente vaginæ dolore correpta est et post vomitus fere continuos et deliria, elapsis 28 horis ab applicatione veneni, mortua est. Sectio monstravit abdomen non tumidum, nullas in cute maculas, labia vulvæ magna paulum tumida et rubra; in vagina, patula flacida pauca grana arsenici crystallini." Permit me to take this opportunity of adding, that I think that the publication of the valuable Lectures of Professor A. T. Thomson have considerably advanced our knowledge in medical jurisprudence, a branch which had hitherto been so much neglected. I am Sir, yours, &c.

MORGAN J.

August 31, 1837.

THE LANCET.

London, Saturday, September 16, 1837.

THE subject of medical education, which we last week noticed as one that was particularly suited for discussion at the present moment, overflows with interest and importance, not only to parents and pupils, but to medical practitioners themselves, who have quitted the closet of study for the field of experience. The road of connection between the quarters of the medical student and the domain of the surgeon is a brief threshold, and the practitioner who thinks that he may cease to regard with anxiety the proceedings in the one, can attach but little interest to the privileges, the profits, and the reputation of the other. He may not be an examiner at the College or the Hall, or live in Lincoln's-Inn-Field or Blackfriars, in such a position as to witness the ceaseless influx of new competitors from the little schools of medicine to the great school of practice. But to suppose for an instant that he can regard with indifference the possibility of his being either ruthlessly trodden under foot by a crowd, or honourably and effectually assisted in his labours as a physician and a man of science, by colleagues fresh from the halls of science,—this is to suppose the practitioners of England insane, or conceited, or criminally indifferent to an immeasurable extent, where reason, the commonest prudence, and praiseworthy sensibility, should be prominent characteristics of their thoughts and actions. Indeed, were there no other motive to incline them to watch narrowly the condition of medical education, this alone should suffice to induce a minute attention to its details,—that the mark on the scale of knowledge which the candidate for rank in the profession is required to reach, determines the number and character of rivals in the arena of practice; for it is past all question that a large amount of scientific attainments is inconsistent with an excessive

number of medical licentiates and diplomatists.

Let us not be misunderstood,—though by this time parentheses of explanation are hardly necessary to ensure a comprehension of the views and language of THE LANCET. Referring to a high scale of medical acquirements in the student, we have in view no plausible scheme of recognised "lectures" and "dissections," "indentures" and "hospital attendance," strained to the highest point of exaction,—the screw carried to its last turn,—a curriculum to empty the pocket. Oh, no! Against Hall "Regulations" and College "Proofs"—"Testimonials" and "Certificates,"—those emblems of false education,—the profession are already at war,—constantly struggling in their arduous duties to themselves and the community. Our pages incessantly teem with evidence of the miserable strength which can be covered by a mail of "certificates." We advocate not the presentation of a single testimonial of any qualification but that of morality, of any fact but that of age, and it is the fallacy of every other certifying document that we would impress on the minds of our brother reformers. Even those which we recommend are open to falsification, but they do at least afford some evidence on matters the truth of which *cannot be established in any other manner*, while there does not exist a single point in medical science on which the student cannot be efficiently tested by examination, nor one in which written assertions may not involve, either forgery, or misrepresentation,—a circumstance which has become so common, so notorious, that the College of Surgeons has itself issued announcements and prospective cautions on the subject.

But the system of admitting candidates to examination without the presentation of "certificates" relative to time and place of education, is fraught with advantages to the profession which have hardly even been broached. In the *propriety* of testing candidates by the *amount of their knowledge*, as an efficient means of ascertaining their competence to practice medicine, the effect on the *mind*, and *manners*, and *disposition*, of the preliminary study, which is likely to be wrought under the new system, has been almost wholly overlooked.

"Didicisse fideliter artes,
Emollit mores, nec sinit esse feros."

Worthy of universal honour and assent is the saying, and, with a slight parody, especially applicable to medicine. The heart-rending contests in the field of practice are not carried on with men possessing claims to rank as pathologists and physiologists, as chemists and botanists,—established like the claims of those of our students who have really acquired for themselves the character of accomplished scholars,—but with the shedders of tears, the exhibitors of pistols, the brain-stumbling, jalap-puzzled fellows who creep or bully through the Halls and Colleges, with a keen sense of having dearly paid for every certificate named in the regulations of those institutions, and being therefore entitled to receive the *quid pro quo*,—the exchange of the small currency of the "recognised," for the large currency of the "recognisers."

The first advantage that would result from adopting the new terms of admission to practice, would take its date even so far back as the earliest stage of medical pupilage. With a clear knowledge of the high standard of qualification which must distinguish future candidates, parents would not indiscriminately devote to the study of medicine either son of an unequally endowed family. They would select the youth with a careful estimate of his natural qualifications, and then, from the first, direct the energies of his mind to those preparatory branches of learning which form the outskirts of the science. At no time would he be voluntarily placed for long intervals where nothing that was accessary to medicine could be reached; and in due season he would have secured to him the instruction of an efficient friend and master, who would at the same time subject him

to the softening influences of good society. The discipline to which the mind of a youth would thus naturally, and in self-defence, become subjected, would eventually have the most important and permanant effects on his intellect and inclinations, supplying to the country a highly accomplished and polished physician, and to the profession a suitable and welcome associate. At present, however small may be the minority of those who do not bear this character on their entrance into practice, the number is quite sufficient to effect the most deplorable and mischievous consequences on the welfare and happiness of the great bulk of the medical community.

A calm consideration of these facts allows English surgeons in general practice no alternative, as friends to their own interests and the public good, but to pronounce a verdict of "abolition" against the present system, and demand the adoption of an uniform and perfectly free plan of medical education, crowned by public examinations. To the long-continued enemies of this great and extensive change in medical law, all appeal is perfectly useless. Their sense of justice, their sentiments of decency, their feelings of sympathy for the much-wronged profession, have by turns been supplicated and provoked—all and ever in vain, and they will finally quit their hold upon the reins of medical government without the solitary merit of having conceded a single reform, without having modified even one principle, in their vicious system of misrule. It is for the profession at large to hasten the emendation which so deeply concerns the public and private interests of the faculty of medicine in this country. The time is fast approaching for the employment of vigorous measures on this subject. Meetings should everywhere be held, and petitions, praying for the institution of a national faculty of medicine, founded on those simple principles which we have over and over again shewn to be best calculated for the security of the public health, and the honour of the profession, should pour in from all quarters to the legislature on the next meeting of Parliament. These demonstrations of opinion will be rewarded in proportion as they are clearly and firmly pronounced. It will be impossible in the face of the overwhelming majority of the profession, and the astounding facts by which its petitions may be supported, to reject the prayer.

The volume of Mr. DENHAM, which we noticed last week, contains many passages which we designed to quote in this Number of our Journal. Space, however, will only allow us to close our observations with the following extract on two or three of the subjects which have just occupied our attention, simply remarking,—with reference to the final sentence of the passage,—that the abolition of existing *laws* may suffice in the way of *abolition* at present. Under a new statute, and with a new "structure," the old corporations and chartered bodies would quickly enough *abolish themselves*:—

"It is indeed a melancholy fact that, to whatever part we turn of medical affairs, we either behold the supine indifference of Government to that which should be the first consideration of intelligent rulers, the public health, or the reckless want of public principle in those who have assumed a superiority over their compeers, and have contrived to rule them with absolute sway. It is, however, to be hoped that a better state of things is now dawning upon us, and that Mr. Warburton and the Committee of Medical Inquiry, will be able to propound a scheme of medical reform, which, by enforcing a uniformity of education for all medical men, and a consequent uniformity of title, will give to the public the best possible security that their health and lives are entrusted to the care of able and scientific men. When we consider how immense is the number of practising surgeons in this country, and reflect upon the vast amount of mortality and disease that must come annually under their view, we cannot but believe, if they practised the profession as a *science* instead of as a *trade*, that they would of necessity, long ere this, have arrived at much greater certainty in practice, and have obtained far greater aptitude in the diagnosis and cure of disease. In the present state of medical government many young surgeons have to learn the practical part of their profession after they have undergone the ordeal of obtaining a qualification from our licensing bodies; and embarking, as many of them

do, in practice, as soon as their hospital studies are finished, without, probably, any private resource to support their station in society, and without, perhaps, feeling any very ardent love for science, it is not very much to be wondered at that they forget the dignified character of the profession they have chosen, and follow it with scarcely any other view than that of mere emolument. Nor is the course of study which students generally pursue in London much calculated to excite their feelings for the cause of science; for the whole routine of education there, notoriously, has been but little adapted to bring into action the latent powers of mind; and it is equally notorious, from the way in which examinations are conducted, that the possession of the diploma, or the empty title of M.D., is no proof whatever of talent in the possessor, for the examiners, good souls, having themselves imbibed largely 'the milk of human kindness,' when a candidate falters in his examination, very considerately set it down to his mental perturbation, and believe that the appearance of their august selves has turned his mind quite topsy turvy; doubtless forgetting that an individual who thoroughly understands a subject, can find no difficulty in so arranging his ideas as to be able to reply to any question that may be proposed respecting it. Here again the iniquity of self-perpetuating medical corporations rises to our view, and we scarcely know which to condemn the most, whether the sins of those chartered bodies, or the all but criminal indifference of Government. Had our medical corporations been differently constituted, and the individuals at the head of them, instead of being behind, been but a little in advance of the 'spirit of the age,' the indifference of Government to protect the public health would have operated but little to the general prejudice, and results the most beneficial to the public and to science would inevitably have occurred. As it is, we can only lament the degree of selfish weakness to which human nature is often obnoxious, but being able to see their error, we should profit by the circumstance, and bear in mind that it should always be the endeavour, even of corporate law-makers, to obtain 'the greatest happiness for the greatest number.' Of this, however, I am assured, that no 'reform' of those institutions that can be effected will be of lasting avail, *they must be altogether and utterly abolished, and a renovated structure raised in their stead.*'—P. 64—67.

GUY'S HOSPITAL.—(*From a Correspondent.*)—To those who are acquainted with the management of affairs at *Guy's Hospital*, little surprise will be created by the appointment of Dr. BABINGTON to the office of physician, left vacant by the death of Dr. CHOLMONDELEY, and the consequent displacement of Dr. HODGKIN. Many years of severe duty at Guy's, as curator of the Museum, as lecturer on pathology, as demonstrator of anatomy, with the most profuse adulation of the treasurer during that period, and continued avowals of extravagant admiration of everything as it existed in that institution, would seem to present strong claims in favour of Dr. HODGKIN, but King HARRISON thinks otherwise. It seems that Dr. HODGKIN is a *Dissenter*—that he is supposed, under the rose, to be liberal in politics, and, above all, he is one of the members of the new London University! Is it wonderful, then, that the distinguished medical acquirements of Dr. BENJAMIN GUY HARRISON BABINGTON should supersede every other consideration or claim? *Sic volo, sic jubeo.*

*** Why, yes, this is rather hard treatment, considering the services rendered to His Majesty, from the time of the death of STEPHEN POLLARD to the present moment.

GUY'S HOSPITAL OPERATIONS.

To the Editor of THE LANCET.

SIR:—The two following instances, which have occurred within the last month, will show how the pupils of *Guy's Hospital* are sometimes treated. Going through the wards, on a Thursday, Mr. Key said, "I'll operate on that man next Tuesday, gentlemen." When Tuesday came, the operation had been performed four days. On the following Wednesday Mr. Key said, "I'll remove that man's testicle, gentlemen, on Friday." On going to the hospital on Friday, to see the operation, the first question that I was asked was, "Have you seen the patient who was operated on yesterday?" "No; what was the operation?" "Mr. Key removed that man's testicle, because it would save him the trouble of coming to the hospital to-day." I am, Sir, your obedient servant,

A PUPIL OF GUY'S.

Guy's Hospital, Sept. 1807.

EXAMINATIONS AT APOTHECARIES' HALL.

THREAT OF SUICIDE.

To the Editor of THE LANCET.

SIR:—It has afforded me great satisfaction to see in your widely-circulated Journal the recent exposures of the system of examinations conducted at Apothecaries' Hall, which must operate most injuriously to the best interests of society. Probably you will allow me to mention a circumstance that occurred on the night on which I presented

myself for examination at that institution. A young man had just come from the country with all his necessary testimonials for the ordeal of examination for practising his profession. These certificates he had possessed a long time previous. When examined on the drugs, he was found very deficient, and, as a last resource, he was shewn the jalap root, when, after looking at it for a long while, *he admitted his ignorance of the substance*, and was told that he might retire, —without his certificate, of course. "Well," he said, "my only alternative is, when I reach home to shoot myself," at the same time showing a pistol, with which he told the examiners that he should commit suicide. The examiners begged that he would reflect before he committed so desperate an act, but he said that their advice was of no use, as he had quite made up his mind on the subject. He was then sent a short distance from the table, when the board consulted together, whether he should have his diploma or not; and at length one of them was sent to the young man to tell him that although they had come to the decision to grant him his licence to practise, yet he was *no more fit to practise than a boy who had been only three months apprenticed*. Thus were the health and lives of a portion of the community committed to this person's keeping. I do not, Mr. Editor, very often trouble periodicals with my communications, but I could not refrain from adding this fact to the accumulation of records against that dangerous institution, Apothecaries' Hall, whose existence has long afforded grounds for terror throughout the kingdom—not to students, but the whole community. I hope that you will be induced, with renewed vigour, to take up the reform of medical law, long so imperatively demanded, and I trust that other facts in support of its necessity will be forwarded to you for public exposure. I am, Sir, your obedient servant,

A LICENTIATE.

Sept. 11, 1837.

*** The author of the above letter has forwarded to us, in a private note, his name and address.

ANIMAL MAGNETISM.

LETTER FROM BARON DUPOTET.

To the Editor of THE LANCET.

SIR:—The last number of your Journal contains a letter on some magnetic experiments performed by me lately at the University College Hospital. My desire to disseminate a useful truth, free from all error, induces me to write to you to rectify whatever is erroneous in the account that has been given of my performances, and to verify some facts which prejudices, and an insufficient knowledge of magnetism, have distorted. Your Journal having for its object the enlightenment of the learned on physiological and medical questions of great importance, you will not, I am certain, refuse me the opportunity of defending myself, and of suppressing those doubts which the letter in question has, to a certain extent, cast upon my intentions, and on the reality of the science which I have come to England to teach.

It would occupy too much space to follow your correspondent, M. T., through all the explanations which he has hazarded in his communication. His letter swarms with them, and the wit that he has expended, is, without doubt, a substitute for something more profound. He has been in India, he has seen something of the remnants of the Psylli of Egypt, and the necromancers of Grand Cairo, and he has written decisively on all these subjects, and yet is completely ignorant of a new fact; for M. T. knows nothing of magnetism, and has never opened even one of the five hundred volumes which already exist on that science. Let me observe, too, that M. T. acknowledges that he has been present at only one of my experiments. He has not occupied a place near the medical gentlemen who have daily been present at my operations. His report seems written rather to amuse than to instruct.

Introduced nearly two months since to the *University College Hospital* by Dr. Elliotson, to demonstrate the existence of magnetism, I at first made some essays before that distinguished physician, which did not present very great results, but we soon after began to arrive at the object of my researches. Phenomena of the greatest importance then offered themselves to our notice, and we had only to prosecute our essays to become witnesses of singular facts, which were well calculated, by their nature, to throw a new light on the domain of the sciences, and around the physiology of medicine. A recital of all those experiments, I have no doubt, will be made by Dr. Elliotson himself*, who will render homage to truth, and tell all that he has seen. The character of that learned man is too well appreciated not to convince every one that his report will be rigorously exact. I shall not anticipate by relating here, what a hundred persons have already seen, and what thousands of others are invited to see.

Yes, Mr. Editor, a new power is revealed to the world, and already it is no longer a mystery. It is open to all men who seek to search into and to observe laws. It is not in the dark, but in open day that this power is demonstrated. Nothing of the marvellous exists in the proceedings which serve to make it known; and, ere long, no more

* Written before the lecture of Dr. Elliotson was published last week.

mystery will attach to its employment than there is in electrical and galvanic apparatus. You know, Sir, of how much consequence it is that the first impressions which are caused by the exhibition of this new discovery should not be rendered false by accounts which have little in them that is sincere.

Allow me to enter upon some details, and not to imitate the jokes of Mons. "T." Laughter and pleasantry are not permissible when a highly scientific question is under discussion.

If it be true, that one man can penetrate another man with a part of the vital principle, which his organization conceals, the life of that individual being necessarily *mise en plus*, the phenomena which appear ought to have a supernatural character, and surprise by their novelty, and by the difference from other phenomena, of the nature, which they present. Well; this hypothesis is realised in the act of magnetism. The individual obedient to magnetism, the man who experiences the effects of this power, ceases, for an instant, to be the same person. Everything is modified in his organization. All his perceptions are quickened, they become more comprehensive, and he is rendered capable of executing things which he could not before accomplish, and of which he had not thought in his habitual state. The agent who produces such a state, gives the means of healing many diseases which have resisted every remedy in ordinary medicine, and the ecstacy which he provokes calls philosophy and medicine to new meditations, which, I am certain, will bring forth doctrines fraught with happy results.

To propagate such a discovery, much prudence is essential on the part of those who undertake the mission, for men are quick in their assertions, and suspicious of imposture, and charlatanry always hangs around those actions which are not perfectly understood. It was at once said, as regards myself, that I had some intimacy with the patients who were magnetised, and that I designed to deceive those who sought to be enlightened on the subject,—without considering that I did not speak the language of the persons whom I magnetised,—without considering that I took the first of those who came to subject themselves to my operations, or reflecting on whom were judges of my proceedings. It would have been most foolish on my part to hope to convince, if I had not had truth on my side.

Ill-will attends at the door of every innovator, and there remains, until the truth which he interprets has been observed, studied, proved; and then justice bursts forth, and the man who has had sufficient genius to discover what was before unknown, receives his recompense; but, too often, after having obtained this verdict, he has ceased to live, the mortifications which envy and ignorance compelled him to suffer, having abridged his days. At least I hope that the same thing will not happen here, but that I shall be at liberty to make known a new science, and develop its rules. Twenty years of experience and observation have made me familiar with obscure facts which I desire to reveal. I invite all the world to become auditors of my precepts. That the truth should be accessible to all, it is necessary that it should be clearly explained, and made perfectly evident and comprehensible; and I will accomplish all that I promise. Very soon, without doubt, thousands of your countrymen will be able to perform the wonders of which they may be witnesses, and sometimes the agents. Let them say if my lips speak imposture, and if the facts which I announce are deceptions, and then judge the man who is come confidently expecting to find a free and enlightened nation ready to learn from him a discovery the importance of which is not yet calculated.

I rely, Sir, from your attachment to truth, on your inserting this answer to those who, animated, without doubt, by a desire to enlighten their fellows, want one essential in their task, that of having studied their subject. If you will permit me, Sir, I will furnish you with a series of articles proper for making known in England the labours of the learned in my own country on the subject of magnetism, and calculated to supply exact notions on its employment as a therapeutic agent. I have the honour to be, Sir, your very humble servant,

LE BARON DUPOTET DE SENNEVOY.

25, Orchard-street, Portman-square,
Sept. 4, 1837.

DISPUTE AT LIVERPOOL.

To the Editor of THE LANCET.

SIR:—I have read in THE LANCET of this day, an account of a dispute between Dr. O'Donnell, of Liverpool, and Dr. Macrorie, of the same place. In my opinion, if the statements be true, they are disgraceful to both parties. Mr. A., the patient, sent for Dr. O'Donnell, "who promised to attend him as soon as he had dined, but neglected to do so." This conduct is not capable of being defended. Neglect to attend a man labouring under retention of urine! And, moreover, it appears that Dr. O'Donnell neglected the patient until the end of the week. On Saturday, Dr. O'D. says, he was again sent for, and tells us that he found the bladder so distended as to fill up the whole of the lower abdomen. Catheterism was tried, and failed. Why so, for a bougie had been passed into the bladder some days before? "And now," says Dr. O'Don-

nell, "I told the patient, that his bladder was full of urine, and could only be relieved by puncture." If the Dr. had said, *I* can only relieve you by puncturing the bladder, it would have been more correct, for an instrument *had* entered the bladder, and, on its being withdrawn, a pint of urine followed; and I boldly assert, that, in the hands of a well-informed surgeon, instead of those of an M.D., a catheter might have been introduced. Sir A. Cooper has given it as his decided opinion, that the operation of puncturing the bladder is unnecessary; however, Dr. O'Donnell does not agree with Sir Astley, and recommended the patient to send for Mr. Manifold, or some other operating surgeon. Why would not Dr. O'Donnell meet Dr. Macrorie? Mr. A., the patient, called in Dr. Macrorie when he found that he was neglected by Dr. O'Donnell. "In the course of the evening Dr. S. and Dr. Macrorie were sent for," says Dr. O'D.; and very properly; for Dr. O'Donnell says, that he (Dr. O'D.) "promised to attend him, but neglected to do so;"—more shame for him. Both the conduct and the practice of Dr. O'Donnell are defensible. He calls on the patient with Mr. Manifold, the surgeon, and says, that he will not meet Dr. Macrorie. The poor patient says, "he has no wish to have Dr. Macrorie, and that he never had a wish to have any person but Dr. O'D., if he would attend to him." Here we have a proof that the patient considered that he had been sadly neglected by Dr. O'D. "About time this the patient," says Dr. O'D., "had a severe rigor." Poor fellow! some *would* not help him it seems, and others *could* not; for the practice altogether was bad, and reflects as little credit on one party as the other. However, it seems that his bladder was punctured, and just afterwards in came Dr. Macrorie, who considered himself as extremely ill-used, and so I think he was. He stated, that he had long known that it would be necessary to puncture the bladder, but he deferred doing so, hoping to succeed by other means. Dr. Macrorie is highly to blame for not having sent for some practical surgeon, who could have passed a catheter; but, instead of doing so, he adopts a very inefficient practice. After Dr. Macrorie saw the patient, he had the bladder punctured *four times!* This, Sir, is scandalous surgery.

It is a disgraceful affair altogether, in a medical point of view, and reflects no credit on any of the parties concerned. I remain, Sir, your obedient servant,

AN OLD SURGEON.

P. S. Sir A. Cooper's words, on the subject of puncturing the bladder, are, "I hold, that we ought to avoid all these operations, and that puncturing of the bladder at all, for stricture in the urethra or enlargement of the prostate gland, is perfectly unnecessary."

DRS. O'DONNELL AND MACRORIE, OF LIVERPOOL.

LETTER FROM DR. MACRORIE.

To the Editor of THE LANCET.

SIR:—Having seen, the "short statement put forth" by Dr. O'Donnell, which appeared in your Number of Saturday last, and which seems to be intended as a defence, on the part of the writer, of conduct which is unjustifiable by every law of etiquette, or honour, I feel myself called upon to give a brief relation of the circumstances, so far as I was concerned in the case, which, I trust, you will do me the favour of inserting in the forthcoming Number of your widely circulated hebdomadal.

Late in the evening of July 31st, I was summoned to visit Mr. A., of whom, and of whose family, I had been the professional adviser for a period of about five years. I found him labouring under considerable mental agitation, in consequence of his not having been able to pass his urine since the earlier part of the day. He had taken of his own accord, two tea-spoonfuls of spirits of turpentine, and had just been in the warm bath by recommendation of Dr. Sorley, who, I found, had seen him a short time before, and who joined me in the mean time. It was agreed to give him five grains of calomel, and follow this up with another purgative, and, having now learnt that other professional men had been sent for, I took an opportunity of saying to Mr. A. (who was disposed at times to be a little impatient under illness), that we must fully understand each other; when he said, "Since I have got you, I want no one else." Next morning we found him more tranquil, his bowels having been freely acted upon, but he had not passed his water. A bougie of a large size was now passed along the urethra, and was arrested, and firmly grasped, Dr. Sorley said, a little before it reached the membranous portion of that canal. Having been allowed to remain there for some little time, and as it would not pass on, it was withdrawn; and one of much smaller dimension immediately introduced, which, passing on to the bladder, the urine flowed freely by its side, and the organ was finally emptied, to the entire relief of the patient, which he did not fail to express in the strongest terms. Some leeches were now recommended to be applied to the hypogastrium, and the bowels to be farther evacuated by a purgative. The following day he was comfortable; had passed his urine freely; pulse quiet; tongue clean, and expressed himself as entirely relieved. On Thursday and Friday he was doing well, and said he passed his urine in as free a stream as he had been in the habit of doing for some time back, as he had had a stricture

for several years, which, at times, annoyed him when at sea and while abroad. I had visited him once each day, with Dr. Sorley who saw him generally in the intermediate time, and on one of these occasions the patient said to Dr. S., as he was now getting well from his present attack, he meant to place himself under his exclusive care on account of the stricture, and, accordingly, an expression escaped him at our joint visit, which led me to think that he began to feel that he might now dispense with the visits of his physician. The following day, however (Saturday), he sent for me, and we saw him together at noon, when we found he had passed a less quiet night; tongue rather brown in the centre; some thirst; pulse only 72; bowels slow; tenderness on pressing the lower part of the abdomen; when, though he was a corpulent man, with a considerable adipose disposition, it was pretty evident that, notwithstanding the urine was coming away, there was some accumulation of it again taking place in the bladder, and it was therefore agreed, in the first place, to apply some leeches, to purge, and use the warm bath, and afterwards an opiate enema, and in a few hours to meet again (namely at eight, P. M.), when, if he was not relieved, the catheter, or bougie, should be had recourse to, with (it was hoped) the same success as formerly. On arriving at home, between seven and eight the same evening, my servant told me a message had just come from Mr. A., desiring me to visit him, for he was a good deal worse. On my way thither, Dr. Sorley met me, and said that he had been to the house of our patient, where he had found Mr. Manifold and Dr. O'Donnell proceeding to puncture the bladder, and that the latter had behaved to him in a most ungentlemanly manner; in compliance, however, with the message I had received, I proceeded to the residence of the patient, and then, indeed, was verified Dr. Sorley's statement; the operation was actually performed, and in this way only were we made acquainted with Dr. O'Donnell's being in attendance. Four days afterwards, meeting with Mr. Manifold, he asked me if I knew how the patient was going on, and told me that he had not since seen Mr. A., and did not intend to visit him again, though he understood Dr. O'Donnell had wished him to do it; that, in reference to the part he had been induced to take, Dr. O'Donnell had peremptorily ordered him to perform the operation, and that he believed Dr. O'D. had been glad of an opportunity of vexing me! Of such a line of proceeding on the part of one of its members, the profession at large will now be enabled to judge. With reference to puncturing the bladder, that operation, which, though simple in itself, is at all times (on account of its probable consequences) to be performed only when every other expedient has failed, I had mentioned it to Dr. Sorley as one to which we might ultimately be obliged to resort, but which we had not yet been without the hope of avoiding, by a renewed perseverance in the means formerly so successful, along with the use of the catheter.

With regard to the statement of Dr. O'Donnell itself, so far as it respects me, being made up of a tissue of misrepresentation from beginning to end, I do not deem it deserving of farther notice, and as I have long since declined to have any intercourse with its author, either professionally or otherwise, in consequence of his unjustifiable conduct in a case of his to which I was called to consult with him, I need scarcely add, that I shall not again (even in this way) be tempted to notice him. I am, Sir, your obedient servant,

DAVID MACRORIE, M. D.

Liverpool, Sept. 7, 1837.

UNIVERSITY COLLEGE HOSPITAL.

ULCERATION AND RUPTURE OF THE SMALL INTESTINES.

In a late clinical lecture Dr. ELLIOTSON exhibited some portions of intestine which had been taken from a patient in his private practice, and of whom he related the following interesting particulars:—The patient, a woman, 50 years of age, was servant to a friend of his (Dr. E.), and first sent to consult him on the 1st of August. She had felt generally indisposed for a week or two previously; she now complained of general indisposition and thirst, but did not suffer from pain in any part of her body. She had walked to his house, a distance of about half a mile. On looking at her tongue he observed it to be all very red, and quite dry, but not in the least sore or inflamed. Seeing the tongue in this state, he felt all over her abdomen very carefully, but there was no tenderness and no pain. She said she "felt unwell all over, and was weak." He considered that some disease was going on in the abdomen; there was no symptom of anything wrong in the chest; the bowels were regular; not the slightest symptom of inflammation was present. No active measures seemed to be called for; accordingly he ordered her diluents, chiefly, and gave her nitre in small quantities. He saw her again in four days time; she felt a little better, but the tongue was in the same state, and the thirst continued. A week after this she again walked to his house; she was much in the same state as at the last visit, but it was noticed that for the last day or two she had occasionally forgotten things, and was sometimes a little drowsy. She had also, after taking some oysters, suffered severely with a sense of heat in the stomach. This was the first symptom that had presented

itself in the abdomen, though, as he had said, he suspected that the mischief was in that region. He was not satisfied now that inflammation was present, but thinking the symptoms did not call for bloodletting he gave mercury in small quantities; and as the redness of the tongue showed great irritation of at least some part of the mucous membrane, he prescribed prussic acid also.

A few days after this, he was sent for to see her; she had been seized with a severe pain in the abdomen, which was followed by five or six stools. The same symptom followed by the stools, he had since ascertained, had occurred on the previous day, but had gone off, and he was not sent for until the present attack. He found the abdomen excessively tender all over. Eighteen or twenty leeches were applied, the pulse being weak, and on the following day she was free from all pain, and said she felt quite well, but the tongue still remained in the same state, and the thirst continued. He saw her two days afterwards; she had then had no stool for forty-eight hours, and she was vomiting up a large quantity of green matter. The vomiting continued for three days and nights incessantly, neither medicine nor drink came up, simply the green fluid, as often as it had accumulated in much quantity. The red, dry, and hot state of the mucous membrane, forbad the use of creosote, except in quantities too small to be efficient; and, indeed, it could not have been beneficial in any quantity, as the stomach was not irritable, but merely got rid of the green fluid, when it, not being able to pass downwards, accumulated in that organ, and there was no motion during that time, though powerful purgatives, such as scruple doses of calomel, croton oil in large doses, and turpentine injections were employed. The pulse rose to 160, the pain in the abdomen, which had been present during this last attack, had not returned, though a little tenderness existed in the region of the cœcum. The patient lay on her side well, talked well, and moved with great strength, yet was evidently dying; she was bedewed with a cold sweat. Of course he had examined as to the presence of external hernia, in every situation in which it could occur. When the purgatives and injections failed to take any effect on the bowels, he (Dr. E.) imagined there was rupture of the intestines in some part, which had produced peritoneal inflammation, as there was not the recurrent spasmodic pain present, which generally precedes or accompanies intussusception, and there was no hernia, nor the pain and tenderness of enteritis.

On a post-mortem examination, the peritoneum contained a quantity of a dirty, dark fluid, such as was contained in the intestines. The ileum, in its lower portion, contained several ulcers, of various sizes, some as large as a silver penny, others not more than a fourth of that size. Not very far from the junction of the ileum with the colon, one of the ulcers had so attenuated the coats of the intestine, that they had given way. The case might be called one of acute ulceration, the patient having been indisposed for three weeks only. A writer in the "Transactions" of the Medical and Chirurgical Society, had stated, that in these cases the patient was seized, at the time of the rupture, with a very acute pain, which continued till the time of death. He (Dr. E.) had published a case in the same work, in which this symptom did not occur, and the present case was another instance against the experience of the writer in question. In this case, the pain went away completely, the patient thinking herself nearly well. So, too, the pain of the peritonitis, which had come on afterwards, was, in a great measure, subdued by the leeches. This cessation of pain occurred in many cases, also, which were on record. The inflammation of the peritoneum of the intestines, was sufficient to account for the great constipation; there was no obstruction in the bowels themselves, but they were completely paralyzed. The interesting points in the case were, that acute ulceration of the intestines could go on without marked symptoms of inflammation; it was rather a slow ulceration of an acute kind; then the giving way of the intestine in one part, producing the great depression and constipation; then the pain all going, at one period, under the use of the leeches, notwithstanding the hole in the intestines, and the violent peritonitis, which went on till death, with scarcely any pain.

CHILDREN'S HOSPITAL, PARIS.

HOOPING-COUGH IN A YOUNG CHILD.—EMPLOYMENT OF BELLADONNA.—SLIGHT CEREBRAL SYMPTOMS.—DEATH.—AUTOPSY.

Pierre Picard, a boy two years of age, was admitted into the hospital on the 7th of June, 1836, under the care of M. Jadelot. The mother had remarked that the child had coughed, more or less, for the last three months; but for six weeks past the fits of coughing had become very violent. On some occasions the accesses of cough were so severe as to bring on convulsive fits, of which the mother says she counted as many as six within fifteen days. The child had previously enjoyed good health, and had been a strong-looking boy. Both parents have been healthy, never subject to any convulsive disorder. The child has never laboured under diarrhœa, passing one or, at most, two stools in the twenty-four hours. Never suffered much while teething.

June 8. The boy now presents a pale, weakly appearance; the eyes light blue;

the eyelashes very long and dark. He has had several severe fits of coughing since he came in; however, the intervals between each fit are passed quietly, without any symptoms of febrile excitement. Pulse 102; respiration 34; performed without any difficulty or uneasiness; abdomen soft, not developed; no trace of pain upon pressure; no diarrhœa; the boy has passed two stools since his admission.

Infusion of violets; mucilaginous draught, ℥xi. *Sulphur bath.* The chest to be rubbed with *Fiorarenti's balsam* (a balsam containing turpentine and ammonia).

9. The child sleeps well at night; appetite good; no fever; bowels opened once without diarrhœa; respiration nearly natural, 30; pulse calm, 96. The fits of coughing have been frequent, and attended with an evident whoop: no vomiting after the fit; no expectoration of any kind. The cervical glands are not enlarged. Continue remedies. Broth three times a day.

10. Cough not diminished; has had three fits this morning; each fit lasts about a minute and a half: no vomiting after; no diarrhœa; eats well; skin moist, but free from fever. *Infusion of mallows; cataplasms of belladonna* over the chest. Three soups in the day.

During the 11th and 12th no change worthy of notice took place; on the 13th we found that the violence of the cough had much increased; the fits were now followed by a discharge of the contents of the stomach; no epistaxis; no diarrhœa; abdomen tumid, but free from pain; skin now warm and moist. The child has an exacerbation of fever towards evening. He is now so cross that it is impossible to count the pulse. Respiration not difficult or oppressed. *Infusion of coquelicot; gum mixture; cataplasms of belladonna* to chest. Two leeches to the right side of the chest. Weak broth three times a-day.

16. The child has had since yesterday several slight convulsive fits, during which the head was thrown back, and the eyes rolled about; they lasted, however, only a few seconds at each. The child now lies in a state of tranquil sleep. The face is moderately and equably flushed; respiration natural, 36; pulse 132. The cough is very violent; the child has had already (ten o'clock) two fits, and has eight or ten during the day. He vomits up everything which is taken into the stomach. Skin warm and moist; no diarrhœa; no epistaxis.—*Coquel.* Sinapisms to the legs; two leeches behind each ear; three light soups.

17. The child lies on its back; is dull-looking and oppressed; the face is flushed; eyes half closed. There has been no convulsive fit this morning, but the mother, whom we have just seen, says he was subject to them when at home. Respiration is oppressed and difficult, 40, each expiration being accompanied with a low, moaning sound. The skin is moist and very warm; the cough is as violent as ever, though the whoop is not now well marked. The least touch brings on a fit of coughing. No diarrhœa. One or two liquid stools a-day. The child was agitated, and cried all night. Pulse small, 140. Chest sounds well on percussion in front; but the little patient lies too uneasily to permit our auscultating him. The pupils are large and dilated; no vomiting; no epistaxis.—*Coquel.* Sinapisms to the legs. Three soups.

18. The child has suffered under the same agitation. Sleeps very little at night. The fits of coughing are not so long, nor is the whoop so well marked as before. The cough, however, is very distressing still, for the little patient thrusts his hand into the bottom of his mouth at each fit, as if to remove some obstruction. He lies stupidly in bed, and every now and then utters a low moan. The skin is warm and dry; pulse very small, 135; no convulsive fit since; no vomiting; respiration is unequal, oppressed, 48; the chest is equally sonorous at both sides, and nothing is heard on applying the ear except a large mucous râle. —*Infusion of mallows. Extract of belladonna*, 1 gr.; *sugar*, 6 gr.; to make six pills, to be taken during the day. Sinapisms to the right side of the chest.

The belladonna was continued for a couple of days, during which time the symptoms continued without any great alteration. On the 21st we found the child lying in bed, half asleep, and much reduced in strength, the face excessively pale and thin; eyes dull. The cough has not abated, but the infant is now unable to cough out, through feebleness. No vomiting or diarrhœa. He had again one short convulsive fit. The skin is excessively warm and dry; the respiration deep, but not much oppressed, 50; pulse rather hard than feeble, 160; no diarrhœa; abdomen not painful. Child is very dull, takes no notice when it is touched. There is bronchial respiration at both sides of the chest; the sound, however, is but little diminished; no difference of sound between the two sides; has passed two stools under him in bed. Continue remedies.

22. Since four o'clock this morning the child has become asphyxiated. At that time the nurse observed that he began to squint, and had small convulsive movements of the face. He now lies on his back, nearly insensible, with the eyes wide open. The left pupil is greatly dilated, the right is of a moderate size; as we observe them they change in form, and have contracted; the left is very small; the right pupil is now not bigger than a pin's head. The respiration is excessively rapid; pulse imperceptible; skin of body warm; extremities getting cold.

In half an hour after the above report was written the child died, without a struggle, or convulsions. The nurse assures us that the evening before death the child sat up in bed, and put both hands to support the vessel from which he drank. She did not observe any paralysis of the limbs during the ten hours which preceded death.

Body examined on the 23rd at ten o'clock.

On removing the skull-cap the dura mater is evidently distended by a quantity of serum underneath, the fluctuation of which is easily felt. When the dura mater is divided, a little serosity escapes through some lacerations accidentally made in the upper part of the arachnoid.

Brain.—General aspect of brain superiorly.—The whole surface of the brain is covered with an infiltration of serous fluid, equally diffused on both sides. The appearance of this fluid is troubled; its seat is in the subarachnoid cellular tissue. The vessels of the pia mater are a good deal injected, and numerous small capillaries run over the surface of the brain in all directions. Neither arachnoid nor pia mater adherent to one another, nor to substance of brain; the pia mater, indeed, carries away with it a very small portion of cortical matter, but this seems to arise from the great softness of the brain.

The base of the brain exhibits exactly the same appearances, with an abundant infiltration of serum, between the membranes. The arachnoid has not lost its transparency at any point. There are a few fine granulations about the fissure of Sylvius, at each side, and a very evident and elevated patch, about eight to ten in number, at the posterior and inferior surface of the right hemisphere. The membranes in the neighbourhood of these granulations are not thickened or adherent; do not contain any yellow, lardaceous deposit; in a word, they do not exhibit the least trace of having been the seat of inflammation.

The *substance* of the brain is very soft, and has lost a great part of its elasticity. It contains a great deal of serum, which may be extracted from it by pressure. It is only moderately injected. The lateral ventricles are but slightly dilated, and contain about two tea-spoonfuls of reddish serum. At the posterior part, near the floor of the ventricles, we observe a lacerated appearance, as if produced by accident, or by distention. The septum lucidum and fornix are very remarkably softened; the other central parts are in a normal state. The pineal gland is infiltrated with serum. The cerebellum and fourth ventricle are normal; its substance, like that of the brain, is soft, but much less infiltrated. The membranes are free from adhesion or granulations, and normal throughout.

Lungs.—No adhesion at either side of the chest, no effusion into its cavity. The anterior surface of both lungs is marked by a number of miliary granulations. The parenchyma of the lung itself is much congested, but no actual inflammation has existed, except at the inferior lobe of the left lung, which is solid in some places; gives way easily under the finger, and is of a deep red colour. The lining membrane of the bronchi is moderately injected; they do not present any appearance of dilatation, no tubercle in the substance of the lungs, nor in the bronchial ganglia.

The pericardium contains a small quantity of serum. Tissue of heart normal, firm, valves healthy; the right side is filled with a large clot. Transverse breadth of both aorta and pulmonary artery, when laid open opposite the valves, one inch and five lines.

Abdomen.—No effusion into its cavity. The intestines are distended with gas; liver brown, firm, four inches high, 2.2 thick, five broad;* no tubercles in liver, or under its peritoneal lining. Spleen 3¼ inches high, one thick, two broad; some miliary tubercles in, none on its surface; it is of a dark chocolate colour, and firm. Coats of stomach normal; it contains a small quantity of greyish matter. The intestinal canal is healthy throughout. The subperitoneal tissue contains, however, a small number of very fine tubercular granulations. The other viscera of the abdomen are healthy.

VOMITING. DIARRHŒA. CREOSOTE.

To the Editor of THE LANCET.

SIR:—Cases of diarrhœa with vomiting, cramp, the rice-water-like dejections, prostration of strength, cold and blue extremities, and other the usual symptoms of cholera morbus, have, during the last month, been frequent in this neighbourhood. Some, I think about eight, have fallen under my observation, in all of which, I have given creosote with the most gratifying results. I would give publicity to one case (which I subjoin), and from which I was led to adopt the practice of giving this medicine generally to allay the vomiting in this disease. I am, Sir, respectfully yours,

C. C. E.

Turnham Green, Aug. 29, 1837.

Mrs. Bridport, a housekeeper, aged 81 years, was seized with violent vomiting and purging, and with cramp of the lower extremities, on the morning of the 7th inst. At eleven, A. M. I found her suffering severely;—her pulse 60, and feeble; countenance shrunk; extremities cold and of blue appearance; her stools liquid, opaque, and colourless, with excessive prostration of

* These form a portion of a series of measurements made to ascertain the normal dimensions of certain organs at different ages.

strength. I advised calomel and opium, of each one grain, to be given immediately, and every three hours with an ounce and half of an aromatic chalk mixture. At five, P. M., I saw her again with every symptom aggravated. Indeed, my medicines had appeared to excite rather than to allay them. Her state at this time induced me to say that she could not survive the night. Having found creosote exceedingly useful in sickness on other occasions, I advised one drop, with each dose of calomel and opium, and the chalk mixture to be discontinued. On taking the first drop she felt relieved, and soon after fell asleep, and slept for six hours. On the morning of the 8th, I found her free from spasm or cramp, sickness or diarrhœa, her pulse risen in power and number; her countenance cheerful; and her hands of a more normal colour. At six, P. M., sickness and diarrhœa returned, but were immediately relieved by another dose of the creosote, calomel, and opium. The after treatment was of the ordinary kind, and, I am happy to add, the old lady is well enough to contemplate a trip to the Sister Isle next week. I am, Sir, respectfully yours, C. C. E.

LIFE-INSURANCE CERTIFICATES.

To the Editor of THE LANCET.

SIR:—I am desired by the Leeds Medical Society to forward to you the annexed resolution, which was unanimously agreed upon at its monthly meeting for July, and has received the signature of nearly the whole number of practitioners in the borough. A notice in your periodical may excite other places to follow our example, and cause them to benefit by it as we, I am happy to state, have already done, as only one insurance company has sent a copy of questions without enclosing a fee,—10*s.* 6*d.* if the policy about to be affected be under 500*l.*; if above, 1*l.* 1*s.* I am, Sir, yours respectfully,

W. STEAD TAYLOR, Hon. Sec.

Leeds, Sept. 7th, 1837.

Circular.—"The medical practitioners of Leeds and the neighbourhood, having been referred to by insurance companies to give replies to series of questions relative to the health of individuals who have been placed under their medical treatment, and who are applicants for policies of insurance, Have resolved,

"'That for the future they will return unanswered such communications, unless they be accompanied by a suitable professional fee from the office, considering that the Insurance Company is the party benefitted by the information thus obtained.'

"Leeds, July, 1837."

TO CORRESPONDENTS.

A Subscriber to QUAIN'S ANATOMICAL PLATES, complains that "On inquiring at his booksellers' for the index and title page of the last series of those plates, he was informed that he could not have them without purchasing the first number of the next series, viz., the nervous system; but as a coloured edition of that series is advertised, it was his intention to have continued the work by taking in that edition, and that he must, therefore, either wait until the coloured edition is published, or submit to the refusal of the booksellers, which is unjust to subscribers in the case of so expensive a work." We really believe that a proper representation of these circumstances would induce the highly respectable publishers of Dr. Quain's plates to comply with the wish of our correspondent, though a good index to the first series cannot be dear, even at the price of a number of the work.

The insertion of *Dr. Sorley's* letter, in reply to the statement of Dr. O'Donnell, of Liverpool, is rendered unnecessary by the publication of that of Dr. Macrorie. Dr. S., indeed, contents himself chiefly with observing that any correspondence at present on the subject is premature, and that he simply denies the truth of Dr. O'Donnell's statements, which will be brought forward, at a proper time, in such a way that the judgment of others may not have mere assertions and contradictions on either side to rest upon in reflecting on the subject.

Reasons connected with the completion of the volume prevented us from preserving the heading of "Records of Medical practice," to the paper which was so introduced, but we will receive the other papers with pleasure.

Mr. Bree will readily excuse us for discontinuing the insertion of any further correspondence on the subject of the discussion in which he has been engaged respecting the "Stowmarket Penny Club." If it had not been considered that the last communications from each party were final, neither of them would have been inserted.

NOTICE.

LONDON SCHOOLS OF MEDICINE.

Those lecturers on medicine, and those gentlemen who may lecture in any department of medical science, in the metropolis, who may be desirous that their establishments should be noticed in the STUDENT'S NUMBER of THE LANCET,—a number especially devoted to the interests of medical students,—are requested to forward prospectuses of their schools, with such explanatory notices as they may consider necessary, to THE LANCET OFFICE, on or *immediately after* Monday next, September 18th, when a notice of them will be included in the list of schools which will be published in that number.